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ORIGINAL ARTICLES.

ON THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE-EAR.[1]

BY H. GRADLE, M.D.,
OF CHICAGO.

IN view of the frequency and danger of chronic suppuration of the middle ear, every practitioner ought to be familiar with its treatment. According to the experience of specialists, such, however, is not the case.

While every modern text-book on the ear gives the information of the method of treating this disease, to him who seeks it, still all the books do not lay down the general surgical principles underlying the treatment in a sufficiently impressive manner. On this account a discussion of the principles upon which the treatment should be based does not seem to me a useless repetition.

Suppuration of the middle ear is the result of infection. This statement, suggested by our knowledge of suppuration in general, is based on the special investigation of the secretion of the diseased middle ear by numerous observers.[2] These authorities all agree that in acute inflammation of the middle ear the most frequent microörganism is the diplococcus known as the cause of croupous pneumonia, either alone or in conjunction with other pus-producing microbes. In other instances one or the other or several of the varieties of micrococci which cause the more common forms of suppuration were found, with or without the proteus bacillus, and occasionally also the bacillus of blue pus. All these forms are known to possess pyogenic properties. Of the diplococcus of pneumonia it has been shown by Zaufal that when introduced into the middle ear of animals it can cause suppurative otitis.

In chronic suppuration of the middle ear (Kauthak) the diplococcus is no longer present. Indeed, we know that it can only lead a short life in the animal body. Its place has been taken by one or several of the other pyogenic microörganisms. Chronic suppuration of the middle ear is therefore very often a secondary infection, and quite commonly a mixed infection. Rohrer[1] claims that when the discharge is not fœtid in odor, only micrococci are present, while offensive odor indicates the work done by putrefactive bacilli.

The elimination of the pus producing microörganisms from the tissues is interfered with by stagnation of irritant pus. In general surgery it is a rule that suppuration ceases spontaneously when the pus can escape freely, at least where there is no complication with tuberculosis and where no mechanical disturbances interfering with the rest or nutrition of the parts exist. The irritation of foreign bodies prevents the onset of suppuration only in as far as it forms a lodging-place for germs. All this applies equally as well to the middle ear. We have here an irregularly-shaped cavity with various recesses. Among the latter the most important one is the attic of the tympanum separated from the main cavity by the ligaments of the ossicles or by adventitious membranes.

In all these nooks and corners pus can stagnate. As long as such retention is not prevented, the lining membrane cannot rid itself of the micrococci which have invaded it.

In practice we find that only a small proportion of the cases of acute suppuration of the middle ear heal spontaneously. The natural cure is most likely to occur in early childhood, and in those patients where the nasal or pharyngeal disorder which led to the ear disease was only transient. On the other hand, the more advanced the patient in age, the more permanent any co-existing naso-pharyngeal disease, and the more severe the infection, like scarlet fever, during the course of which the ear trouble occurred, the less favorable are the chances of a spontaneous cessation.

In order to aid the tissues in their elimination of the pus micrococci, it is necessary, *first*, to remove all stagnating pus; *second*, to render the pus which continues to form unirritating, and *third*, to correct any condition that either keeps up the infection or interferes with the nutrition of the ear.

Pus cannot be removed from the meatus in any more efficient way than by a syringe. Wiping with cotton, the dry method in vogue some years ago, is painful unless very skilfully done, and cannot clean out corners as does a stream of water. The syringe should have a thin nozzle which can be deeply

[1] Read before the Chicago Medical Society, January 19, 1891.

[2] Zaufal, Netter, Weichselbaum and others quoted in Scheibe, Arch. of Otology, 1890, p. 168. Levy and Schräder, Arch. f. exper. Pathol. und Pharmacol., Bd. 26, p. 223. Kauthak, Arch. of Otology, 1890, p. 25. Gradenigo, Centralbl. f. Bacteriologie, 1890.

[1] Morphologie d. Bakterien d. Ohres, etc., Zürich, 1889.

inserted into the meatus, and no force should be used in syringing. Rubber-bulb syringes or the tube of an irrigator can be more easily steadied than a piston syringe. Many of the so-called ear syringes, especially those with an olive-shaped nozzle, are useless. Unless unavoidable, syringing should never be intrusted to the patient. With a fairly large opening, especially in the lower part of the drumhead, it is generally not necessary to syringe out the drum cavity itself by introducing within it any canula. Under such circumstances a forcible current of air sent through the Eustachian tube with a Politzer bag and proper syringing of the meatus are usually sufficient to remove all retained pus. Whether this has been thoroughly accomplished can be most easily told in those cases in which the discharge is offensive in odor. If by the time of the second treatment the discharge has lost its odor our purpose has been attained. It can be set down as an absolute rule that no otorrhœa ever heals so long as the pus retains any odor of decomposition. On the other hand I have never met with a case of chronic suppuration of the middle ear with inodorous discharge which could not be controlled by persistent treatment, accompanied, when required, by attention to the nose or pharynx. When there is no odor present the only criterion of the efficacy of the treatment is the diminution of the discharge.

When the opening in the drumhead is so small or so high up that a current of water thrown into the meatus cannot remove all the retained pus, we can cleanse the middle ear either by irrigation through the Eustachian tube or by means of a canula inserted through the perforated membrane. It is no more unpleasant to the patient to force a warm saline solution than air through the Eustachian catheter, but it is more difficult. Beside, it cannot be done in every instance. Where there is suppuration of both ears it is easier to irrigate at once through both tubes by means of the nasal douche employed as in the Politzer method of inflation. Occasionally tubal irrigation shows its efficacy by washing out inspissated pus which previous syringing through the meatus had not been able to remove.

Often, however, we can reach pus accumulations more thoroughly by means of a fine tube inserted through the perforated membrane. Indeed, when the opening is in Schrapnell's membrane this is the only efficient method. For in suppuration of the attic of the tympanum this space is commonly separated from the cavity of the tympanum by adhesions and false membranes, and cannot be reached through the Eustachian tube. The silver tubes fitting hypodermic syringes are quite suitable for this purpose, the point being slightly curved in order that it may reach in all directions. Sometimes it becomes necessary to enlarge the opening in the drumhead. The canula can be used with greater steadiness and efficacy, if attached, by means of a flexible hose, to a syringe which the surgeon does not himself manipulate. Of course, it is necessary to use the speculum and illumination with such a canula. If, by any or all of these means, the discharge cannot be freed of its odor, there exists either caries with inaccessible clefts, where pus is retained, or the suppuration has involved the mastoid cells.

With thorough cleansing alone many cases of chronic suppuration of the middle ear will heal, though not all. We can, however, decidedly hasten the cure by the judicious use of antiseptics. The pus which continues to form after syringing is still irritant, and it is by checking further decomposition of this fresh pus, until the next time of treatment, that we deprive it, to some extent, of its noxious properties.

The use of antiseptic solutions instead of pure water for syringing is of doubtful advantage, for we cannot remove retained pus any better with the former than with the latter. The continuance of suppuration is due to the presence of microbes in the tissues themselves, where antiseptic syringing cannot reach them.

Where the discharge, however, is very offensive, it is more agreeable to the surgeon to employ a deodorizer like the permanganate of potassium.

In order to accomplish anything by means of antiseptics they must be left in the ear in excess in order to render the fresh pus bland. Aqueous or glycerin solutions are either inert for this purpose if weak, or unnecessarily irritating if concentrated. Peroxide of hydrogen is frequently used by some surgeons, but actual trial has convinced me that it is not superior to thorough irrigation. It aids only by decomposing with effervescence, and thus reaching mechanically further than careless syringing. The best means of preventing decomposition of fresh pus is by the use of an antiseptic in the form of a bland, dry powder, especially the one first introduced by Bezold, viz.: boric acid. Comparative trial has shown me that this can be rendered even more efficient by adding thereto *one-sixth of its weight of salicylic acid.* The addition of more than one-sixth its weight is too irritating. Although boric acid is scarcely a germicide, it checks decomposition when present in sufficient quantity. Salicylic acid possesses this property even to a greater extent, but when used alone it is too irritating. I have experimented somewhat with subnitrate of bismuth triturated with one-half per cent. of corrosive sublimate. This is perhaps equal to boracic acid, but not superior, except in those rare instances in which the insufflation of boric acid

is followed by a watery discharge lasting a few hours. Iodoform powder is absolutely useless for the present purpose, but may be employed to protect denuded surfaces in caries or after operations in the ear.

I have seen no reason to experiment to any extent with other substances in the treatment of chronic suppuration of the middle ear. For when we can remove all retained pus thoroughly and there are no complicating conditions, we can obtain a cure by the use of boric and salicylic acids as rapidly as we can expect it in view of the existing morbid conditions. It is not rare to find the discharge practically checked by a single treatment. Whenever a discharge free from odor is not at once influenced by the treatment, we must look for complicating conditions. Lately there has been considerable protest from the school of Schwartze, especially by Staake,[1] against the use of insufflations of boric acid. It is claimed that the powder, by blocking small perforations, may lead to retention of pus and even fatal consequences. Undoubtedly there is some ground for caution. When the opening is small we should assure ourselves, by looking through the speculum, that it is not obstructed by the powder. The meatus should never be packed, and it is generally not advisable to give the powder to patients for personal use. However, in an experience of 7000 cases, I have never seen any untoward results from insufflation.

As the result of a fairly large experience, I have come to the following conclusions as to the best management of those complicating conditions which interfere with the cure of suppuration of the middle ear. Polypi do not in all cases require surgical removal, although this, when thoroughly done, is usually the speediest way of dealing with them. If they are not so located as to dam-up the pus, and are not coexistent with caries, they will sometimes disappear by shrinkage as the otorrhœa improves under routine treatment. More often, however, this is not the case. It has seemed to me that polypi, unless very large in size, are of importance principally as an indication of caries, rather than as mere pathological entities.

If a carious spot is detected in the wall of the meatus or in the middle ear, all granulation-tissue should be curetted away, and any loose spicula of bone removed with the forceps. If this procedure proves inefficient, the dissolution of the dead bone by means of hydrochloric acid, according to the suggestion of O. Bull,[2] may prove of service. He inserts pledgets of cotton saturated with a four per cent. solution of the acid, and leaves them in contact for twenty-four hours. This is to be repeated until the sequestrum can be detached.

[1] Deutsche med. Wochenschrift, No. 50, 1887.

[2] Archives of Otology, 1889, p. 123.

I have not had occasion, since the publication of Dr. Bull's paper, to remove any large spicula of bone, but for small carious spots which had interfered with the success of the ordinary treatment, I have employed the instillation of muriatic acid (5 per cent. of the acid, chemically pure, in water) with satisfactory results. I have left the fluid in the ear fifteen to thirty minutes according to the tolerance of the patient, repeating the application on successive days until I found the discharge diminished. Caries may be present, however, in such a position that the dead bone is inaccessible to the probe. An otorrhœa which persists under the usual form of treatment, and is not kept up by nasal or pharyngeal disease, always arouses a suspicion of caries. In such cases the use of hydrochloric acid will assure the probable diagnosis by means of its curative influence. Whether caries of the ossicles can be treated successfully in this manner I am not prepared to state, since I do not know how to recognize this condition, except by examination of the removed ossicles. When the carious ossicles are inaccessible, by reason of adhesions around them, as in suppuration of the attic with small perforation in Schrapnell's membrane, a cure of the otorrhœa can only be expected from surgical interference, which should not be attempted by any save an expert.

Finally, I wish to emphasize the fact that there are instances of suppuration of the middle ear which either do not heal at all, or else relapse very soon on account of naso-pharyngeal anomalies. There is either an obstructing lesion in the form of enlargement of the pharyngeal tonsil or thickening of the septum, or else a persistent suppurative rhinitis. Whether there is in these cases a constant reinfection of the Eustachian tube, or whether an injurious influence is exerted upon the nutrition of the middle ear, has not yet been determined. In these cases the successful treatment of the otorrhœa will depend upon cure of the nasal or pharyngeal disease.

65 RANDOLPH STREET.

PROPOSITIONS SUGGESTED BY THE FAILURE OF MERCURY AND POTASSIUM IODIDE TO CURE A CASE OF NERVE-SYPHILIS SUBSEQUENTLY CURED BY MERCURY ALONE.

Report of the Case.[1]

BY D. D. STEWART, M.D.,
LECTURER AND DEMONSTRATOR OF DISEASES OF THE NERVOUS SYSTEM AT THE JEFFERSON MEDICAL COLLEGE.

I FEEL constrained to offer an apology for giving a single case the dignity of a special report. Although it has seemed to me one of distinct interest, I have refrained from publishing it until now, trusting

[1] Read before the Philadelphia Medical Coterie, February 24, 1891.

that I might meet in current literature, if not in practice, a second case, or more, similar, and might thus be permitted to draw definite conclusions, where I can now only suggest indications, upon an obscure, though important, therapeutic point.

The features of interest presented by the case are these:

A man without discoverable preceding history of lues presented symptoms of disease of the nervous system suggesting a syphilitic origin. As far as could be ascertained by searching inquiry he had not been suspected of having had syphilis until he came under my observation, and had never received anti-luetic treatment of any kind. He was placed on full doses of potassium iodide in combination with the mercuric chloride for some time, absolutely without benefit. He was afterward rapidly cured by mercury alone. The following is the history:

H. M. B., male, aged forty-three years, dentist. First seen November 15, 1888. For the past nine years has had occasional attacks of migraine, chiefly affecting the right side, with accompanying gastric disturbances; apart from this he has always been in fair health until the trouble for which he sought advice began.

About November, 1887, he first noticed that his gait was becoming a trifle clumsy, and that the legs had a tendency to stiffness and heaviness. This gradually increased until it became quite perceptible to others about April, 1888. His gait then began to be decidedly spastic; the legs were stiff, and easily wearied by walking short distances. On May 2, 1888, right-sided headache appeared, and soon became intense and continuous, with daily remissions and very decided nocturnal exacerbations. The ache, from the first, grew very severe on the approach of night, and continued so unbearably so that it absolutely prevented sleep. He stated that he had spent, for several months, most of his nights walking as best he could about the floor of his bed-chamber until sheer fatigue, or a very free use of anodynes, induced sleep. On examination the head pain was found to be strictly limited to the right side, and greatest in the temporal, inferior, and superior anterior parietal regions. The skin in these situations was hyperæsthetic. Deep, continuous pressure seemed to relieve the pain, while sharp percussion over the temporal region much aggravated it momentarily. There was also aching in the nucha, and muscular soreness relieved by pressure. With the onset of headache there had also appeared slight right-sided deafness, and soon after tinnitus.

His speech was a trifle thick, and there was decided tremor in the tongue, without noticeable paresis. The tongue presented ulcerations closely resembling mucous tubercles. His lower limbs exhibited the symptoms of spastic paraplegia. He walked with difficulty by the aid of two sticks; the legs were stiff and the soles of the feet dragged the floor as he progressed. The deep reflexes were exaggerated. The limbs had a tendency to jerk spasmodically at night, and the muscles to cramp. Spasticity and loss of power were greater on the right. Dorsal flexion of the toes and foot on both sides was incomplete. Coördination was unimpaired. He walked as well by night as by day, and with eyes closed as when open. Muscular sense was also carefully tested in other ways, and found unaffected. Tactile, pain, and temperature sense were tested a number of times in the extremities and trunk, and always found normal. There had never been any pains in the limbs, and no tenderness could be elicited by pressure on the nerve-trunks. No electrical examination was made, as at that time I had no portable batteries, and he was unable to come to my office. The pupils responded normally to light and accommodation. There were no ocular paralyses; eye-ground was found normal. The bowels were constipated. He had lost considerable flesh since the illness began.

I made a diagnosis of local cortical meningitis; spastic paraplegia, due to specific disease of the lateral columns; perhaps beginning bulbar paralysis. I looked upon the case as one of probable nerve-syphilis, but though the patient was seemingly very anxious to assist me in discovering the cause of his ailment, he absolutely denied any knowledge of specific infection, though I repeatedly questioned him. On stripping him during my first visit I found about the trunk a number of variable-sized, somewhat coppery-looking, cicatrices, that suggested the remains of a luetic eruption, the history of which, however, he informed me apparently in good faith, he could not recall.

He had been under the care of some seven or eight physicians since the head trouble began. Headache being by far the most trying symptom, he had preferred to be treated rather for it than for the paraplegia, trusting to obtain relief from the latter afterward. As he had had all prescriptions filled by the same druggist, I was readily able to obtain copies of them. Syphilis had evidently not been suspected. The treatment had been quinine alone, and in combination with morphia, bromides, bromides and morphia, gentian and sodium bicarbonate, and occasionally calomel and jalap to act on the bowel. Mercury (except as a purge) or the iodides had not been prescribed, and he assured me that at no time in his life had he been treated for syphilis. I placed him upon twenty-grain doses of potassium iodide in combination with one-twentieth of a grain of mercuric chloride three times daily, and at night at first full doses of potassium bromide alone, and later in combination with cannabis indica. In a few days the dose of potassium iodide was increased at first to thirty, then to fifty grains, and the mercuric chloride to one-fourteenth of a grain. There was absolutely no improvement on this treatment at the expiration of a month.

Bromides in very large doses had not influenced the distressing headache and insomnia. Hyoscine and morphia were also used ineffectually. It then occurred to me that as the patient in the past had, in all probability, never been subjected to a mercu-

rial course, it might be well to administer mercury alone, as it was not unlikely that the full doses of potassium iodide ingested were eliminating the mercuric iodide before it could exert any effect. I therefore placed him on one-third of a grain of the mercurous iodide in pill form, combined with a little opium and belladonna, four times daily, discontinuing the potassium iodide. The effect was quite astonishing. In three days there was noticeable improvement. Nocturnal headache, insomnia, and restlessness had distinctly lessened. From this time improvement was decided and continuous, and so rapid as to surprise me. In three weeks the headache had entirely disappeared. His tongue grew clean and normal in appearance. He became able to walk about without a cane, the spastic and paralytic condition having diminished materially. Two weeks later he was able to return to his vocation; he was eating and sleeping well, and had gained considerable flesh. He now drifted out of my hands, though he still continued the mercury. I hear from him occasionally. The amelioration in the spastic condition continued to a certain point and then ceased, as might be expected, anti-specific treatment having no power to replace lost tissue or to remove the secondary ordinary lesions. His gait is still noticeably paralytic, especially in the right leg, though he can readily get about without a cane.

So far as I know, the advisability of the conjoint administration of mercury and potassium iodide in lues has never been questioned. The majority of practitioners are, I believe, in the habit of so treating the late lesions of syphilis. And yet we know that the iodides of potassium and sodium, especially the former, are very active eliminants of mercury as of other metals. It is by some considered almost criminal to neglect to follow a prolonged mercurial course by potassium iodide to prevent the retention of the mercury in the system.

In this case I cannot but think that had mercuric iodide been administered alone, in the same doses in which it was prescribed in conjunction with the potassium iodide, an effect analogous to that produced by the mercurous iodide would have been obtained.[1] It may, therefore, I think, be justly inferred that the inefficiency of the combination was due to the fact that mercury, and not potassium iodide, was indicated in this case; why, it is difficult to explain. Althaus[2] states that he has found that mercury acts as a true specific in all primary luetic nerve lesions just as it does in all the earlier manifestations of the secondary period, and that it is infinitely superior to any other drug. He relates a case where epileptiform seizures were present, with intense headache, vertigo, insomnia, tinnitus, paralysis of the left leg, and specific ulceration of the tongue, in which, after a thorough trial of large doses of iodide of potassium, without benefit, recovery resulted from the use of mercury. He, therefore, regards potassium iodide secondary in usefulness to mercury. This opinion, however, is not general.

Gowers,[1] in reply to the question, whether there are late syphilitic lesions on which iodide has no influence and which yield to mercury, states that he has never met a case of intracranial syphilis in which there was reason to believe mercury was successful while the iodide failed. He, however, relates a case of luetic peri-adenitis of the neck, compressing the brachial plexus, and causing paralysis of the arm, in which full doses of potassium iodide, administered for a period of six weeks, exerted no effect, and which was subsequently removed by mercury. It has occurred to me that in those cases in which mercury, and not potassium iodide, is distinctly useful, a mercurial course in the past has never been instituted. It is well known that in many cases of nerve-syphilis, primary and secondary luetic symptoms have been so slight as to pass unnoticed by the patient, while the nervous symptoms are the first that distinctly appear. In these, of course, there has been no specific treatment. May it not be that in these cases the syphilitic virus still retains the contagious and transmissible qualities of its earlier stages, and is only capable of being brought into subjection by mercury.

In conclusion, a consideration of the foregoing suggests the following propositions:

1. Does not the fact that the success of mercury administered alone, immediately after the failure of full doses of a mercurial administered in combination with large doses of potassium iodide, indicate that potassium iodide probably eliminated the mercury too rapidly to exert any effect, and, therefore, that it is better not to give these drugs at the same time? or, if they are coincidently administered, should not the mercury be given in a somewhat larger dose than when it is prescribed alone?

2. That, in a case of disease of the nervous system the cause of which is suspected to be syphilis, though no history of specific infection is obtainable, it is unwise to exclude lues because no result accrues from a thorough course of potassium iodide.

3. In such a case, in all probability, no mercurial treatment, or, at least, no thorough course, has ever been tried. Will this fact, granting it, account for the failure of potassium iodide, and the subsequent success of a mercurial administered alone.

[1] When mercuric chloride and potassium iodide are combined mercuric iodide results.

[2] The Treatment of Syphilis of the Nervous System, London, 1890.

[1] Lettsomian Lectures on Syphilis and the Nervous System, 1889.

THE PEROXIDE OF HYDROGEN—ITS USES IN ABDOMINAL SURGERY.

BY CHARLES P. NOBLE, M.D.,
SURGEON-IN-CHARGE OF THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.

THE importance of the peroxide of hydrogen as a germicide, and more especially as a pus-destroying agent, is becoming firmly established by rapidly accumulating clinical evidence. A very considerable experience with the drug has made me enthusiastic concerning its remarkable qualities; and I find myself extending its application almost daily. In general, in order that antiseptic or germicidal agents may be used effectively, it is absolutely essential that all foreign material, discharges, etc., be first removed, so that the agent may be brought in direct contact with the surface or tissue to be acted upon. It is also true that the power of penetration of the antiseptics in common use is slight, so that they are reliable only in combating strictly superficial septic processes. This is particularly true of corrosive sublimate solution, which, by its action on albuminous discharges, forms an inpenetrable covering which prevents the solution from coming in contact with the tissues to be acted upon. In this respect the action of the peroxide solution is essentially different. It attacks, disintegrates and oxidizes all discharges and dead tissue with which it comes in contact, thus favoring its contact with and action upon underlying tissues. Moreover, the products of its activity escape as water and carbonic acid gas. At this time I do not propose to discuss the relative value of the peroxide of hydrogen as a germicide. I believe that our knowledge upon that subject will be far more exact after a little time than it is at present. The fact, however, that this agent has the power to oxidize dead organic matter suggests to my mind a wide field of usefulness for it in preventing sapræmia or ptomaine poisoning, in the treatment of suppurating tracks and cavities in which dependent drainage cannot be had, and in which free irrigation with water is impracticable.

In my work in abdominal surgery I have found peroxide of hydrogen of positive value.

In cleaning the hands preparatory to operation I have found it very useful, especially when the skin about the finger-nails has become somewhat horny or roughened from too much use, or from frequent washings, or from prolonged contact with antiseptic solutions. Its power to loosen and to remove dead epithelial cells, and to soften the skin about the nails, is quite remarkable. Moreover, all foreign material about the nails is either oxidized and removed or is made more accessible to the sublimate solution which is used later. In practice I have used the peroxide after scrubbing my hands through three waters with soap and the nail-brush, then soaking them in turn in saturated solutions of permanganate of potassium and of oxalic acid, and before soaking them in corrosive sublimate solution.

Bacteriological examinations have shown that even this method (omitting the peroxide solution) does not make asepsis certain, as germs have been removed from the subunguial spaces after it has been faithfully carried out. I have not been able to test the value of the addition of the peroxide of hydrogen solution in securing asepsis by bacteriological experiments, but practically I feel convinced that it is of service in securing that end. The settlement of the question authoritatively will be of great interest to all those who believe in satisfying an antiseptic conscience.

In the management of the drainage-tube after abdominal section, under special conditions, the peroxide solution has been of signal service. In typical cases, in which the drainage-tube is removed after from one to three days, there is no indication for its use. But when from any cause the drainage-tube must remain in longer, it is useful in keeping the tube and drainage track sweet and free from pus. On a number of occasions after a tube had been in place from a week to ten days, and the discharge had become slightly purulent, I have been able to combat successfully the tendency to suppuration, to shorten the tube gradually, finally to substitute a gauze plug for the glass tube, and to secure rapid healing of the drainage track; when otherwise a sinus would have resulted. One such case was one of a ruptured large ovarian tumor, having contents of a jelly-like consistency, which had become distributed throughout the peritoneal cavity. Jelly-like material was discharged through the tube for two weeks, and yet by the use of the peroxide solution rapid healing was obtained. Another case was one of post-operative intra-peritoneal hæmorrhage. Tarry blood was discharged through the tube for ten days, yet the same care secured the same result. Another striking case was one of fæcal fistula which formed after the removal of a dermoid ovarian cyst —presumably caused by the growth of a small bunch of hair from the cyst into the bowel. The track was kept clean and the peroxide was used freely. The fæcal fistula closed in three weeks, and the remaining sinus closed within two months from the date of operation, being kept open for a time by an infected omental ligature, and closing promptly after its discharge.

The peroxide solution has been applied to the drainage track and to the inside of the tube by saturating absorbent cotton, held in a slender long-handled forceps, and passing this down the tube. The peroxide solution has been used pure or diluted (one to two or three).

I have not used the peroxide solution within the

peritoneal cavity during operation, but believe it will prove useful in disinfecting infected pedicles. In removing pus sacs rupture frequently occurs, deluging the broad ligaments with pus. Under these circumstances the ligature applied to secure the pedicle necessarily becomes infected. Heretofore I have washed away septic material with boiled water, and later applied bichloride solution on a sponge to the region of the ligature. In such cases it seems probable that the peroxide solution will be of real value.

In cleaning the abdominal wound preparatory to removing the sutures, the peroxide solution has proven very efficient; especially if a dry dressing—boric acid or iodoform—has been used. Finally, if any pus has formed in the track of the drainage tube or of any of the sutures, the peroxide solution will remove it more efficiently than any other agent.

TWO CASES OF TRAUMATIC HYSTERIA.[1]

BY HENRY HUN, M.D.,
PROFESSOR OF DISEASES OF THE CHEST AND NERVOUS SYSTEM IN THE ALBANY MEDICAL COLLEGE.

THE study of injuries resulting from accidents is of peculiar interest, inasmuch as in them other important questions besides that of treatment are presented. Accidents are usually the result of negligence, and injuries caused by such accidents usually involve suits for damages, in which the physician or surgeon must state in court how seriously the patient is crippled by the accident, for enjoyment and usefulness in the world. This, in the present condition of expert evidence in this country, is an extremely unsatisfactory process. In the case of injuries to the bones and muscles this question concerns the surgeon alone, and can generally be definitely answered. When any portion of the nervous system is injured the answer is more difficult, and concerns not only the surgeon, but also the physician, and especially the neurologist. When the injury occasions, as it sometimes does, an organic disease of the nervous system, such as a cerebral tumor, a myelitis, or a neuritis, the diagnosis and prognosis of the case is not difficult, except that these diseases are often of very slow development and it may take months or years before the tumor attains sufficient size or the myelitis sufficient extent to give rise to definite and diagnostic symptoms. Therefore, in many of these cases the full extent of the injury done to the nervous system is not manifested until long after the question of damages has been settled. But besides these organic diseases it has been recognized for a long time, and is now being recognized more and more clearly, that not infrequently there result from accidents functional diseases of the nervous system which are very obscure, both in their symptoms and their pathology, and which depend in their etiology probably quite as much on the fright as on the physical injury.

These cases of functional nervous diseases are not apt to occur associated with severe injury of the bone and muscle. Probably because the long stay in bed which these latter injuries require and the concentration of the patient's attention upon these forms of injury are very favorable factors in the treatment of the functional neuroses and probably prevent their occurrence; although these neuroses do sometimes occur associated with severe injuries of the bone and muscle. Many of these cases of traumatic functional nervous diseases were described by Erichson under the name of spinal concussion, or railway spine, and were considered by him, as the name implies, to be due to a concussion of the spinal cord. But the more the symptoms of these cases were studied, the more difficult it became to regard them as due to any diseases of the spinal cord, and it became more and more clear that the symptoms were of cerebral origin, and the term spinal concussion, or railway spine, was replaced in turn by the terms railway brain, traumatic hysteria, traumatic neurasthenia, and traumatic neuroses. As these diseases are of a functional nature, their symptoms are such as can be simulated voluntarily or involuntarily; and as the temptation to voluntary simulation is great, on account of the damages claimed, the question of deception is to be considered a most important one. These cases have been the subject of many discussions in various neurological associations during the past few years, but on account of their wide interest I need no apology, I think, in calling the attention of this Society to two cases belonging to this class which present many of the points of interest common to all such cases:

CASE I.—An unmarried dressmaker, aged nineteen years, was sitting in the last car of a railway train standing before the station and saw another train on the same track approaching rapidly from behind. Every one in the car shouted, "Jump for your lives!" and ran to the forward door. She got through the door, and, as the platform of her car was crowded, she stepped on the platform of the forward car and was about to jump to the ground when the two trains collided and she was thrown upon the track. A young woman who had stood beside her on the platform was thrown off and instantly killed. She was carried into the station and did not think she was much hurt, but soon became unconscious. When she regained consciousness and was helped on board the train she found that the right leg was numb and paralyzed. When she

[1] Read before the New York State Medical Society, February 3, 1891.

arrived home she presented a few slight bruises and complained of a numbness and weakness of the right leg and of pain in the lumbar region, which, during the ensuing weeks, grew steadily worse, and was associated with severe pain in the occiput. About a month after the railway accident she had an attack of convulsions, and again ten days later she had another similar attack. After she had been lying about twenty-four hours in this second attack, I saw her for the first time in consultation with her attending physician, Dr. Melick, of Fort Edward. She was then in a typical hysterical convulsion, her head being strongly retracted. Her movements were very violent, but though she threw herself from one side of the bed to the other, she did not throw herself out of it, nor did she hurt herself against the wall. In her convulsive movements all parts of the body moved. There were exaggerated knee-jerk and traces of ankle-clonus present in both legs. The pupils were equal and reacted to light. She was constantly shouting and raving that she was in a lunatic asylum and begged not to be sent upstairs among the noisy ones, whom she heard shrieking. She also saw knives and blood on the walls of her room. The attending physician stated that she did not feel pin-pricks in her right leg, but did in her right arm. Before examining her I stated in her presence that it seemed to me that the arm must be anæsthetic as well as the leg, as hemianæsthesia was usually present in such cases. She responded well to my suggestion, and when I examined her I found that the right arm and leg were absolutely insensible to pin-pricks, and the right side of the face very nearly so. Ovaries somewhat tender, but deep and continued pressure on them did not arrest the attack. Great tenderness over the spinous processes of the lumbar vertebræ, not over the others. Toward the end of my visit, as I made a feint of leaving to return to Albany, she ceased her convulsions and raving and talked rationally enough, complaining only of pain in the head.

After my visit the patient remained in about the same condition, making very slow progress toward recovery. She continued to have convulsions at irregular intervals and complained of numbness and heaviness of the right leg, which she seemed to be utterly unable to move. She showed marked tenderness of the spine. The right side of the face was very slightly anæsthetic, the right arm was slightly more anæsthetic, the right leg was completely anæsthetic. She was unable to walk or bear any weight on her right leg, principally because it caused such a severe pain in her back. There was no increase of the reflexes in the leg. She was unable to sit upright, but reclined during the day in an invalid's chair. The railway accident occured in November of 1888. In March, 1889, without litigation, the railroad company paid her $8500 damages, and after this the gradual improvement in her condition which had been taking place did not seem to be in the least accelerated. She remained a cripple, unable to use the right leg, and suffering from frequent attacks of hysterical convulsions during the next year.

Many times during this year she was urged to come to the hospital for treatment, but could not be persuaded to do so. Finally, after months of waiting, in April, 1890, she entered St. Peter's Hospital. At that time she complained of some headache in vertex and occiput and of paralysis of the right leg. She also complained of severe pain in the left ovarian region shooting around to the back. This pain was worse during and before menstruation. She was having from three to six attacks of convulsions each month, was well nourished, walked with the aid of crutches, and in so doing dragged the right leg. There was complete paralysis of all the muscles of the right leg, and complete anæsthesia and analgesia of that leg. Passive motion of the right leg was painless, but showed much muscular resistance, and the muscles could be felt firmly contracted, certainly with enough power to move the leg. There was no muscular atrophy nor fibrillary contraction. The movements of all the muscles except of the right leg were normal. Exaggerated knee-jerk and trace of ankle-clonus were present and equal in both legs. There was slight anæsthesia and analgesia of the right hand and arm, but not of the face, and there was ovarian tenderness on both sides, most marked on the left.

After entrance into the hospital the patient was given fifteen grains of quinine every night for the first three nights and a very strong faradic current was daily applied to the right leg. This strong current was scarcely at all painful, but caused active muscular contraction, and the patient was urged to increase the movements of her leg, which were occasioned by the muscles contracting under the application of the electricity. She was confidently assured that a rapid recovery would take place, and was encouraged in every way. Each day the leg moved more freely during the application of the electricity, and the patient found that directly after the electric current had been applied she could herself move the leg a little. Improvement having once commenced was rapid. At the end of five days she could walk better, the leg felt less numb, and the application of the faradic current, which was at first almost painless, had become extremely painful. Ten days after entrance into the hospital the patient walked with only a slight limp, and the right leg was only slightly analgesic; and in less than a month after entrance she was entirely well, and has remained so ever since, and has never had any return of the hysterical convulsions.

There are many things about this case which make it seem not impossible that the whole thing was assumed for the purpose of obtaining money from the railroad company. After the railway accident the patient did not seem to be particularly hurt, but went home, where she was surrounded by a sympathetic family and sympathetic friends, who undoubtedly suggested to her the possibility of obtaining damages from the railway company. After this had remained in her mind for a month or more, she began to develop symptoms of a severe nervous disorder, which symptoms might have been feigned.

She seemed to be unconscious, but in that state she was capable of receiving suggestions, as, for instance, that "the whole of one side of her body was anæsthetic instead of the leg alone," and acting upon this suggestion the whole side of her body became anæsthetic. Also, when I told her that I must go back to Albany and she would lose the benefit of my visit, she very promptly came out of her attack of unconsciousness and talked to me quite rationally. Then, too, the long-continued paralysis of motion and sensation in the leg was evidently a mental one purely, because under purely mental treatment—that is, isolation in a hospital and the application of the faradic current—this paralysis rapidly and entirely disappeared. And yet all these symptoms and conditions are what we frequently meet with in ordinary cases of hysteria, and it is no longer maintained that hysteria is assumed simply for the purpose of troubling relatives, friends, and doctors, but that it is a real disease, although exaggeration and involuntary simulation are prominent symptoms in it. If we had seen this patient without having obtained any history of a railway accident, we should have regarded her as simply a case of hysteria, such as often results from a sudden shock or long-continued worry or mental strain, and which recovered promptly under appropriate treatment.

We have, then, the alternative of regarding this case as one of functional disease of the nervous system dependent on fright, and either hysteria or very closely allied to it, or to regard it as a case of malingering pure and simple. With the first supposition the symptoms and course of the case correspond exactly, and it resembles cases of hysteria which are of frequent occurrence. Under the second supposition, however, the case is not so easily explained. The patient has not complained of some simple symptom like vague neuralgic pains, dizziness, general weakness, or loss of memory, in regard to the reality of which we must depend merely on her word; but she has simulated an actual and very complicated disease, and has simulated it accurately, which is no easy thing, even if she had abundant opportunity of studying such cases, which is not probable. Moreover, it seems altogether probable that if it were a case of malingering, she would have shown sudden, or at any rate more rapid, improvement, after having been given the large damages which she obtained. Undoubtedly in many cases of hysteria there is a decided element of exaggeration and deception, and both of these elements may have been present in this case; but the prospect of damages did not tend to diminish these factors. On the other hand, it certainly seems true that as the basis of this case there was really functional disease of the nervous system consequent upon the fright and shock of the accident, and that the diagnosis, traumatic hysteria, is justified.

CASE II.—A woman, aged thirty-six years. On the 1st of October, 1885, while walking in the street her foot caught in a hole in the pavement, and, as she struggled hard to pull it free, it was suddenly released, and she was thrown some distance, her head and the left side of her body striking the ground violently, so straining and bruising herself that she had to be carried home. She did not lose consciousness, but during a month she remained in bed, vomiting everything that she swallowed and having pain in her head, throat, abdomen, and the left side of the body. The same symptons continued during the next month, but she got out of bed and then found that her left leg seemed shorter and weaker than the other, so that she could not lift it from the floor.

She entered the Albany Hospital March 7, 1887, stating that since the accident she had suffered from nausea, vomiting, pains in the head and in various parts of the body, and had had two attacks of general trembling. During the thirteen months previous to entrance she had taken nothing to eat but peptonized milk, except that on two occasions she had tried solid food with disastrous results. On entrance the patient was anæmic, the spine was tender, and there was some hyperæsthesia of the left side of the body and great tenderness in the left ovarian region. The left side of the pelvis was drawn up by muscular contraction, so as to cause an apparent shortening of the left leg. There was ankle-clonus and exaggerated patellar reflex in the left leg. She could walk only with a crutch and cane. The most urgent symptom in the case was the persistent vomiting, and to relieve this she was given a quarter of a grain of hydrochlorate of cocaine in a half-teaspoonful of water five minutes before eating. This method of treatment, which I have never known to fail in cases of simple irritable stomach, acted well in this case also, and the vomiting ceased and did not return. About two weeks after entrance, during which time she had taken three meals of solid food daily, she was etherized and the left leg was moved about violently in all directions. Before the etherization she was assured that under treatment and while under ether the leg would be restored to its proper length. Since that time the left leg has seemed to her to be as long as the other. Her back was cauterized several times. She remained in the hospital six weeks, her treatment consisting of frequent cauterization of the back, the application of electricity, and encouragement. When she left the hospital she could walk without cane or crutch and limped but very slightly. She ate well and had no nausea nor vomiting, although she still had some pain in her back and in different parts of her body. She herself said she felt like a different woman.

In July, 1890, she received, after long litigation, the sum of $6500, and on December 11, 1890, I saw the patient again. She walked freely about the house with a slight limp, but in the street carried a cane, because she frequently felt as if her legs were

collapsing under her, and as if she would fall if she did not sit down or have some support. She limps because her left leg feels awkward and seems short, as if the cords at the knee and ankle were contracted and drew the leg up. The shortness of the leg is entirely relieved when her back is cauterized, after which, during a few days, she does not limp. The cauterizations are made every two or three weeks, on account of attacks of vomiting associated with intense pain about the waist, and in all the upper part of her body, and with great hyperæsthesia of the skin—all of which symptoms are entirely relieved by the cauterization. She also has dizzy spells in which she sometimes falls to the ground, but in which she never loses consciousness.

In this second case the symptoms are in many respects quite different from those of the first case, and yet there can be no doubt that it is a clear case of hysteria, such as we are constantly meeting with in practice, and under appropriate treatment the hysterical symptoms almost completely disappeared. In this case the great improvement was obtained more than three years before the damages were awarded, instead of afterward, as in the first case. In both cases hospital treatment was necessary, and I doubt not that a stay in the hospital now of some months would make a complete cure in the second case as well as in the first. Just as in the first case, in this second case also the receiving of large damages did not favorably modify the disease, the patient being in the same condition now as she was for a year before the damages were received. In regard to the question of malingering, the same thing may be said concerning the second case as was said concerning the first, and the fact that the second case improved so much under hospital treatment several years before the damages were awarded to her, makes the question of simulation extremely improbable, because if the disease were simulated, the simulation would almost certainly continue until the damages were received.

In conclusion, I would say that in this short paper I have not attempted to exhaust the subject of the traumatic neuroses, but I have merely wished to present to the Society two cases of well-marked functional nervous disease belonging to such a clear type of disease as hysteria, which were the result of accidents. Similar cases have been reported by many observers, so that I think the occurrence of hysteria following and occasioned by accidents cannot be doubted.

If these cases of traumatic hysteria, as well as the other forms of traumatic neurosis, were, in their early stage, isolated from their family and friends and given special treatment in a hospital, there can be no doubt that they would recover much more rapidly, and would obtain a much smaller sum of damages from those responsible for the accident. Of course, these cases cannot be confined against their wills in a hospital; but if, when a suit for damages on account of traumatic functional nervous disease was commenced, the defendant were to make the offer to pay all expenses of the treatment in a hospital, in the hope of obtaining a rapid and complete cure, I think that in many cases the offer would be accepted, and in the other cases the fact that the offer had been made would put the defendant in a better light before the jury, for no expert could deny that had such a course of treatment been adopted the case would have stood a better chance of recovering. Finally, in estimating the amount of compensating damages it should be remembered that a considerable number of these cases are easily and rapidly cured under proper treatment, and especially so after the question of damages has been definitely settled.

HYPEREMESIS GRAVIDARUM.

BY STANLEY M. WARD, M.D.,
OF SCRANTON, PA.

THE paper on this subject by Professor Hirst, of the University of Pennsylvania, before a recent meeting of the Philadelphia Obstetrical Society, together with its discussion by some of the leading members (*Annals of Gynecology and Pediatry*, November, 1890), has constrained me to give my personal experience with two cases, and in connection therewith my views on the subject formed by that experience—somewhat brief, it is true—and the perusal of a great deal of the modern literature on obstetrics.

There seems to exist no doubt in the minds of obstetricians, that if the life of a pregnant female suffering from hyperemesis can be saved only by interrupting the course of pregnancy and sacrificing the life of the fœtus, such a course must be pursued; but there does evidently exist a grave doubt in the minds of many, and these, too, men whose honesty and capability none will gainsay, whether such a question need ever arise. There is such a wide difference of opinion, that should the practitioner consult authorities for a solution of the problem in a given case, the chances are that he would find himself much bewildered. He would find an author like Playfair teaching that "there is abundant evidence that every now and then women do die of uncontrollable vomiting, whose lives might have been saved had the pregnancy been brought to an end;" while, on the other hand, Braüne, whose experience is probably equalled by no other living obstetrician, states that he "has never observed a lethal issue in consequence of the uncontrollable vomiting of pregnancy," and speaks of abortion as only permissible from a "scientific point of view."

In discussing the paper before alluded to, Dr. J. Price also states that he never knew of a death from this disorder, though he had made inquiries, not only at home but in rural localities, of practitioners of large experience. Dr. Jaggard, in his article in the *System of Obstetrics*, edited by Hirst, goes a step further, and questions the diagnosis of "death from uncontrollable vomiting of pregnancy" in the absence of post-mortem proof. Indeed, were it my object to strengthen either side of the question, quotations could be easily multiplied.

It ill becomes anyone to dogmatize in this matter where so many able men differ; nevertheless, the outcome of the cases I have seen—the histories to be hereafter given—and what seems to me to be the *rationale* of the disease, force me to agree with Professor Hirst, who, in closing his remarks before the Obstetrical Society on the occasion referred to, said: "If a pregnant woman becomes the subject of a disease which has its origin in the condition of pregnancy, or which is much aggravated by the existence of pregnancy, and if by this disease the woman's life is placed in danger, then it is not only justifiable, but it is incumbent upon us to terminate the pregnancy, thus saving one life, and that by far the more important one, when, otherwise, two would be sacrificed." Physicians do not like to bring about premature evacuation of the uterus. Our profession is maligned and slandered in this respect altogether too freely. I do not believe any body of men is so often tempted, by money and influence combined, to commit an overt act, with so little yielding, as is the medical profession—and, though perhaps foreign to the subject, I wish to say emphatically, that I believe physicians often permit their patients to die rather than end a life only just begun. I do not defend this course; I believe it to be difficult to justify it, but that it is true no one with a knowledge of the facts will deny.

In the treatment of hyperemesis gravidarum it is only up to a certain time, in the majority of cases, when abortion is at all indicated, that the question of producing it ought to be considered. While a few instances are recorded of its having brought about cures almost miraculous, yet, as Playfair says, "when it has failed it seems to be on account of undue delay." Let not the practitioner, therefore, ease his mind altogether by the thought, that after failing to relieve the vomiting by the use of all the various drugs recommended, the local applications and mechanical procedures, he can still interrupt the pregnancy at will. The drugs are legion: cerium, ingluvin, cocaine, arsenic, opium, and so on through the list—"stomachics," "alteratives," "tonics," "sedatives,"—one and all have been used for the relief of the "vomiting of pregnancy," and besides these there remain ether spray, blisters to the spine, correction of uterine displacements, applications of nitrate of silver, electricity, and dilatation of the os uteri. A fair trial of all these measures, with many more which space forbids mentioning, would consume, I think, the whole nine months of utero-gestation; and while it is true that vomiting may cease spontaneously or as an effect of one or all of these agents, it is altogether likely—if the case has arrived at that pass when abortion as a means of relief was being seriously thought of—that Nature will empty the uterus during the death-throes of the patient, leaving the physician two deaths to ponder over instead of one. Without pretending to possess an infallible judgment or powers of discretion above the average, my deliberate opinion is that after a few days' use of oxalate of cerium, of Fowler's solution of arsenic alone or combined with the deodorized tincture of opium, morphine, with or without cocaine (hypodermically or not), restricted diet, pop-corn (a homely remedy, but one I have seen used with good effect), absolute rest in bed, rectal feeding, correction of uterine displacements, should such exist, with local applications—I say, after using each of these for a few days, and failing to relieve the patient, I would then dilate the os uteri, and this likewise failing, would stop treating symptoms and proceed to attack the disease at its headquarters, viz., in the uterus, and before a great febrile rise, before the brown tongue, the glazed and reddened buccal cavity, the anxious facies and delirium warn us of the rapid approach of the "grim monster," this must be emptied, or so treated that it will empty itself, always providing that one of our former procedures—dilatation—has not already brought about such a consummation.

Case I.—Mrs. E., a well-developed brunette, of excellent family, was married when about thirty-four years of age to a gentleman many years her senior. Four or five years before her marriage she suffered a severe shock by falling on her back against the back of a car-seat from the jolt caused by two trains colliding. She developed "railway spine," probably, and was invalided for some time, though for a year prior to her marriage and for some time afterward she was better than before, and able to walk and to travel to some extent. About a year after her marriage she had a miscarriage at two and a half months, the cause of which is unknown. She was then in Florida, and her physician there said she had cellulitis, and metritis thereafter. Nausea and vomiting were not pronounced symptoms. While at the seashore in August, 1887, she failed to menstruate; but that function not having been performed regularly for some little time, it was thought of no importance, and it was not until late in the month, when sickness at the stomach manifested itself, that she thought herself pregnant. A physician was consulted, who failed to relieve her, and she came home. On September 5th her family physician was consulted, who

diagnosed pregnancy, but who, from what I can learn, made no particular investigation of the case. For a month Mrs. E. was under his care, with no improvement. In fact she was confined to her room most of the time, and was becoming nervous and somewhat hysterical. Early in October the gentleman with whom I was then associated was called in consultation. His note at that time was: Patient somewhat thin, and vomiting almost continually, retaining nothing, apparently. Believes herself pregnant, and is in good spirits over the fact. All efforts to introduce the finger into the vagina are followed by so much pain and nervous excitement that I desisted for the nonce. A condition resembling vaginismus obtains. Ordered vaginal injections of hot water; glycerin also, as a lubricant. Bowels to be cleared out with an injection of soapsuds, and minute doses of calomel in milk-sugar to be dropped dry on the tongue every fifteen to twenty minutes for six doses.

October 4. Has had several movements of bowels. With much difficulty, and in spite of strong protests on the patient's part, a digital examination of the vagina and uterus was made. Great resistance of the vaginal walls; os tincæ hard; uterus not apparently enlarged, but hard, and firmly fixed by adhesions. Very little displacement. This examination, though conducted with the greatest care, annoyed the patient very much, and she became more excitable after it, and vomited with much exertion several times thereafter. The next day she was salivated, and there was also very marked gingivitis, whether due to the mercurial or not it is impossible to say. With this exception there was no change in her condition. No attempt to feed her in the usual way was hereafter made. Instead, nutrient enemata were used four times during the day and night. Vaginal suppositories of cocaine and belladonna were also employed. There being no improvement following this treatment, a few days afterward an attempt to dilate the os by the finger was made. This being found impossible, we endeavored to introduce a rubber bougie as far as the internal os; this likewise resulted in failure. Like all the other vaginal manipulations, these were followed by excitability and vomiting. A resort was now had to morphine, and a sixth of a grain was administered hypodermically twice daily with an apparent good effect. This respite, however, proved but temporary, and the patient again began losing ground.

13th. Another attempt was made at dilatation, which was likewise unsuccessful, and was followed by renewed vomiting and excitement. The patient protested loudly against further vaginal or uterine manipulation. She averred that the pain was most excruciating, and insisted that nothing should be done to interrupt the pregnancy. Some doubts were now expressed by her husband as to her condition, and the physicians began questioning themselves as to her real condition. Marked emaciation, fever, and mild delirium now became prominent symptoms, with the temperature partaking of the "typhoid type," as did likewise some others of her symptoms. The vaginal injections and suppositories, feeding *per rectum* every six hours, with the hypodermic use of morphine twice daily, together with small quantities of dry malted milk—which her stomach seemed to retain—were now the measures relied on, though little perceptible effect was obtained, and on the 16th a last attempt at dilatation was made; this was also unsuccessful. On the 19th and 20th it was thought there was a slight amelioration in her symptoms, though when the writer saw her on the 21st, in the absence of my associate, I saw little hope unless, under slight anæsthesia, say to the obstetrical degree, the uterus was forced to part with its contents. I was overruled, however, and nothing was done, save as above mentioned. Neuralgic pains came on during the night, with pain in the eyes, ears, and throughout the entire body. Delirium became more marked, and she sank rapidly, dying of exhaustion during the forenoon of October 23d. In adjusting the bedclothes a few minutes after death, a fœtus of nearly three months was found between the limbs of the patient.

I think comment is unnecessary. It seems to the writer that this case carries its own moral with it.

CASE II. Mrs. A., mother of one child born in 1884, failed to menstruate in May, 1888, from which fact she believed herself pregnant. She was a nervous, excitable woman, about thirty years of age. During her first pregnancy nausea and vomiting, though present, were not severe. She felt much chagrined and displeased at her present condition. During June she began to suffer from "morning sickness," and shortly became so bad that her physician was called. He treated her for a week with the usual remedies, but no relief being obtained, the patient retching and vomiting almost continually, recourse was had to morphine and cocaine hypodermically, and an examination *per vaginam* made. In this case, as in the former one, the vagina was small, and objections were made to the examination. Nothing of any value was learned. The os uteri was tightly closed. A peculiarity about this case was, that though the patient might be nauseated, and complaining most bitterly of her "sick" feeling, the introduction of the finger into the vagina was sufficient to stop all bad symptoms for the time. Acting on this discovery, vaginal injections were ordered, and twice daily glycerin tampons were introduced into the vagina well up against the cervix. This respite, however, lasted only a short time, and in a few days the patient utterly refused food, retched and vomited nearly all the time, became restless, slept but little; her tongue was becoming brown, and her breath offensive; she was slightly delirious at times, and there were evening exacerbations of fever.

Our therapeutic resources were about exhausted. It is not necessary to mention all the drugs used; local applications and counter-irritation had also been tried. In the condition in which this patient now was, with the result of Mrs. E.'s case before us, would we be justified in giving Nature a further chance, and in the meantime wait? This was the question that came to the minds of the attending physician and myself, as we talked over the case. We agreed that the worry and grief under which our

patient labored probably had a great deal to do with her condition, but a knowledge of this fact failed to assist us in our efforts to combat the symptoms. She herself had not even intimated that an interference with the pregnancy was what she desired. Her husband was very much distressed, and feared for her life. We agreed to wait twenty-four hours longer before deciding on further measures, and ordered the nourishment *per rectum* to be continued, and administered a sixth of a grain each of morphine and cocaine hypodermically. The vagina was also washed out and a suppository of cocaine and belladonna inserted. As long as she was under the effect of these drugs she rested quietly; but their effect was transient, and late that night we found her again vomiting, and rolling from one side of the bed to the other, groaning and moaning with the feeling of indescribable sickness. Her family were now most thoroughly alarmed, and urged that any means, by which her life might be saved, be adopted. More on account of our own fears for the patient's safety than in accordance with their demands, we introduced a bougie into the os uteri the next morning, and packed the vagina. She was kept gently under morphine all day. Her bad symptoms ceased almost entirely; but dilatation had proceeded too far for the safety of the fœtus, and a faint "show," with occasional pain, warned us to expect what soon happened; in forty-eight hours the uterus was empty. Mrs. A. had slight abdominal tenderness, accompanied with some rise in temperature for a few days thereafter, but these soon subsided, and her recovery was complete. Nearly a year afterward she became pregnant, and in due time gave birth to a healthy child. Early in this pregnancy her stomach threatened to make trouble again, but it was only for a short time, and her pregnancy pursued thereafter the usual course.

While any remarks on either case may appear entirely superfluous, I cannot forbear calling attention to a few facts connected with each. In Mrs. E.'s case it is probable that had it not been for unknown and uncertain factors, viz., the old spinal trouble and the "fixed" condition of the uterus, forcible dilatation under an anæsthetic would have been done. Whether dangerous pelvic diseases might not have been lighted up, had this been attempted, and the ultimate outcome been just what it was, is a question I am not able to answer. In the case of Mrs. A., while fully cognizant of the fact that the unwelcome pregnancy had much to do with her condition, yet our efforts had proven unavailing either to calm her mind or to check the vomiting, and it was felt that she was rapidly passing into a condition in which, perhaps, even the most radical measures would be of little use.

417 ADAMS AVENUE, February 11, 1891.

A CASE OF RUPTURE OF THE SHEATH OF THE ADDUCTOR LONGUS MUSCLE.[1]

BY JOHN B. HAMILTON, M.D., LL.D.,
OF WASHINGTON, D. C.

A CASE of rupture of the sheath of the adductor longus muscle lately came under my observation, and, as the injury is an unusual one, I thought it worthy of record. I am indebted to Assistant Surgeon Geddings for the compilation of the clinical history:

Wm. L. Marshall was admitted into the surgical ward of Providence Hospital, Washington, D. C., February 7, 1891, suffering with a tumor upon the upper and inner aspect of his right thigh.

The patient, who had been an enlisted man in the United States Army, gave the following history: About two years ago, upon an alarm of fire being sounded, he ran down a steep flight of winding stairs and slipped and fell, with his leg and thigh in a position of extreme extension. He suffered considerable pain and was confined to bed for several days. Shortly after this he noticed the formation of a tumor upon the upper and inner aspect of his right thigh. The tumor, which increased in size, incapacitated him for duty, and he was discharged from the service by the Examining Board for physical disability.

The records of the Adjutant-General's office show the following:

"Private Wm. L. Marshall, Battery 'B,' First U. S. Artillery. Discharged at Fort Columbus, N. Y. H., August 12, 1890, because of disability produced by a tumor on the inner aspect of his right thigh."

Major J. R. Gibson, surgeon, U. S. A., reports the case as follows:

"An enlargement of the right femoral canal, ... which is complicated by a swelling or enlargement (muscular) on the inner aspect of the thigh."

On admission to the Providence Hospital, Washington, D. C., six months after his discharge, there was found upon the inner side of the right thigh, below Poupart's ligament and the sartorius muscle, a hard, non-fluctuating tumor, about the size of a hen's egg, and which varied in size, according to the patient's statement, being increased after exercise in the erect position and diminished after rest in the recumbent position. The tumor was movable and reducible, there was no gurgling upon taxis, and only a very indistinct impulse upon coughing. The patient being anxious for relief, and the diagnosis being somewhat obscure, an exploratory operation was determined upon. I operated Sunday, February 8th, in the presence of the hospital staff and class of the Georgetown Medical College. The integument was divided and the layers of tissue were incised upon a grooved director. Upon reaching the tumor it was found to have no connection with the abdominal cavity, but to consist of a portion of the adductor longus muscle, which had pro-

[1] Read before the Medical Society of the District of Columbia, March 18, 1891.

truded through a rupture in its fascia. The swelling was divided parallel with the muscular fibres. A rubber drainage-tube was introduced, the wound was closed by silkworm-gut sutures, and an antiseptic dressing was applied. The drainage-tube was removed in twenty-four hours; the wound healed by first intention, and the sutures were removed by the tenth day. The question of removal or excision of the tumor was not considered. A microscopical examination of a section of the tumor was made by Dr. Geddings, who found it to consist of striated muscular fibres. The patient made an uninterrupted recovery from the operation, the temperature at no time exceeding 38° C. It is now very noticeable that the tumor increases in bulk upon flexing the leg upon the thigh and the thigh upon the abdomen. Patient being anxious to resume his trade as a tailor, was discharged at his own request March 5, 1891, but was cautioned to avoid the use of the sewing-machine, and to keep constant elastic pressure applied to the tumor for some months.

I could easily have removed the projecting portion of the muscle, but I considered it better policy to allow it to remain, as the removal of the muscle might have resulted in permanent lameness; whereas he can now walk without limping, if his thigh is bandaged.

One naturally inquires what course should be adopted if such a case should fall under observation immediately after the accident. The answer is that the swelling should be cut down upon and the fascia united by sutures. The diagnosis may easily be made by observing the changes that take place during flexion and extension of the limb.

PERITYPHLITIS.[1]

BY HUGO PHILLER, M.D.,
OF WAUKESHA, WIS.

IT seems strange that the description of the cæcum, the vermiform appendix, and the ileum, is, in certain respects, different in the several text-books on anatomy. All agree that the cæcum, or caput coli, is a blind pouch about three inches in diameter, two and a half inches in length, which forms the widest part of the intestine. It varies much, however, both in position as well as in shape. It is most frequently found, not in the iliac fossa, but on the psoas muscle itself, or in the pelvis.

According to Treves, who also denies the existence of a meso-cæcum, it is entirely surrounded by peritoneum from the ileo-cæal valve to its apex, and no areolar tissue is behind it, as described by the older anatomists.

Bardeleben[2] came to this conclusion as early as 1849, from an examination of one hundred bodies. Ransohoff, in a paper read before the Section on Surgery of the American Medical Association, May, 1888, found in sixty-three examinations (only twice in adults) that the cæcum was invested only in front and laterally by peritoneum, and he is convinced that perforations of the cæcum, or appendix, without involvement of the peritoneum, are "physical impossibilities."

Drs. E. W. Lee and J. B. Murphy, of Chicago, in an article entitled "Early Operations in Perityphlitis,"

"try to account for this discrepancy of opinion by different interpretation of these observers as to the manner in which the peritoneum is reflected around the vermiform appendix at its base; for while it appears to be within and completely encircled by peritoneum at its mesenteric attachment, about one-eighth of its entire circumference is not covered by that membrane."

The appendix vermiformis is a blind diverticulum of the cæcum, round, tapering and hollow, subject, however, to a great variation in size, shape, and situation, its general direction being upward and backward behind the cæcum. According to Fitz, the usual position is behind the ileum and its mesentery, with the tip pointing toward the spleen. Its walls contain but a small amount of muscular tissue, so that solid contents are not easily extruded into the cæcal cavity. It is for this reason very properly called "the death-trap of the intestines." In embryonic life the cæcum and appendix form one continuous pouch. Toward the fifth or sixth week the cæcum appears at the side of the rudimentary intestinal loop, in the form of a short and broad dilatation. While it grows in length, its width does not continue uniform, it being widest at the base, where it joins the colon. The differentiation between the upper third and lower two-thirds of the cæcum does not commence until the tenth week, and as it progresses the former rapidly widens, while the latter does not greatly increase in calibre. The appearance is thereby presented of a long, narrow tube hanging from and continuous with the apex of the projection from the intestinal loop. The cæcum and the appendix are thus formed. They are continuous with each other in the axis of the former, and, in the first half of embryonic life, are cylindrical like the small intestine. It is only at the sixth or seventh month that three ampullæ in the cæcum form the longitudinal muscular fibres in bands or tæniæ. They descend from the colon and meet at the apex of the cæcum—that is at the root of the appendix; one lies on the side of the bowel into which the ileum enters, a second is placed on the postero-external aspect of the colon and cæcum, while the third runs along the anterior aspect of the gut. By the equidistant disposition of these bands in the fœtal cæcum, it is divided into three parts. Uusually the part of the cæcum to the right of the anterior band grows quite out of proportion to that

[1] Read before the Brainard Medical Society.
[2] Virchow's Archives, Bd. 2, p. 584.

on the left, and the anterior wall of the cæcum becomes more developed than the posterior. As a result, the true apex of the cæcum is turned more and more to the left, until at last it is placed in close proximity to the ileo-cæcal junction, and can only be recognized by noting the point of origin of the appendix. The highly-developed part of the anterior band becomes so dependent and prominent that it forms a new or false apex to the cæcum, and it is to this projection that the anatomical term *apex* is usually applied.

Judging from the absence of the appendix vermiformis, which J. T. Whittaker[1] calls a relic or rudiment of a subsidiary stomach in lower forms of life, in the greater number of omnivorous animals except man, ourang-outang, and a species of rodent, the wombat, it seems physiologically to have no influence on digestion, except that it may act as a lubricator (like the tonsils), as it always contains a thick, glairy mucus. The normal appendix is, with very few exceptions, found completely surrounded by peritoneum and having generally a distinct mesentery, by which it is attached to the under layer of the mesentery of the ileum, and for this reason the peritoneum is necessarily involved in every perforation of the appendix.

The appendix varies in size, in the character of its walls, and in its contents. It may vary in length from one and a quarter to nine inches. In the museum of the Pennsylvania Hospital an appendix nine inches in length is described by Wistar. It lay behind the colon, reaching the under surface of the liver.

A long appendix generally takes an upward direction. Sometimes it lies on the psoas muscle with or without its tip in the pelvic cavity. It may stretch across the pelvis and become adherent to the sigmoid flexure of the colon, and has been seen in one instance, by Dr. J. H. Musser, of Philadelphia, in the inguinal canal, associated with a hernia. The character of its contents is also pathologically of importance. Various articles have been found in the appendix, such as fæcal masses or fæcal concretions, chiefly; but there have appeared, also, seeds of various kinds, buttons, bristles, worms, shot, pins, and gall-stones. Haeckel and Buhl even found concretions of meconium in the appendix of a newborn child.

There are certain anatomical points which favor the occurrence of local inflammation in this region:

1. The fixed position of the cæcum, restricting the amount of its peristaltic action.

2. Its deep transverse sacculi, affording great opportunity for the lodgment of hard fæcal matter or foreign bodies.

3. The arrangement of the ileo-cæcal valve preventing relief to the distended cæcum by crowding backward its contents.

4. The vertical direction of the ascending colon, along which the contents of the cæcum must be moved onward.

5. The existence of the vermiform appendix, so admirably adapted for catching and retaining small foreign bodies.

Morbid Anatomy.—On section of the abdominal walls there is found, especially in the right iliac region, an œdematous state of the tissues—either serous œdema or infiltration of pus due to the burrowing of the primary abscess. The peritoneum exhibits an intense degree of general or limited inflammation, and serum, pus, and sometimes blood, are found in the peritoneal cavity. In severe cases large flakes of lymph cover the intestines, the parietal peritoneum, and the abdominal organs; the intestines are more or less adherent to each other, according to the duration and degree of the inflammation.

The location of the abscess, usually circumscribed, depends upon the position of the cæcum; it is either in the right iliac fossa, just above Poupart's ligament, or behind the cæcum, or in the pelvis. Its size also varies, as it contains sometimes only two to three ounces, and in other instances more than a pint of pus. The appendix is found always in the abscess, and has generally undergone some changes. There is either inflammation and ulceration of the mucous membrane, serous infiltration of the walls, or perforation discovered. Such a perforation varies in size, sometimes surrounding the appendix entirely, sometimes only large enough to admit a probe. In the canal near the cæcum a foreign body is found in about sixty per cent. of the cases, but some authors think this percentage is too small.

The following conclusions must be drawn from the morbid anatomy:

1. Peri-cæcal inflammation is due to the inflammation, ulceration and rupture of the appendix vermiformis, with the secondary formation of an abscess.

2. The position of the abscess depends entirely upon the position of the appendix.

3. The larger number of cases of inflammation and ulceration are due to the presence of a foreign body occluding the canal—called by Ransohoff "retention inflammation."

4. There is no evidence of the existence of infiltration of the walls of the cæcum, other than that caused by a catarrhal infiltration or ulceration of its mucous membrane, the most common forms of ulcer being stercoral, typhoid, tubercular, and perhaps syphilitic.

5. The symptoms of a catarrhal infiltration of the

[1] Pepper's System of Medicine, vol. ii.

mucous membrane of the cæcum are those of a colitis rather than those of a typhlitis, and ulceration of the cæcum does not give rise to symptoms of typhlitis, unless the peritoneal covering becomes involved.

6. Very few cases terminate fatally, for resolution takes place, or the abscess either becomes encysted or ruptures into some neighboring organ.

Causes and Diagnosis.—While external violence, such as a fall, or blow, or the effort made in lifting a heavy weight, may be the exciting cause, the presence of a foreign body, however, or of a small mass of dried fæcal matter, is, in a great majority of cases, concerned in the production of perityphlitis.

Age and *sex* appear to have a causative relation. According to Fitz, who made a careful analysis of 257 cases, 80 per cent. occurred in males and 20 per cent. in females; 76 per cent. were under thirty years of age, and 50 per cent. under twenty years of age. Congenital or acquired irregularities in the position and attachment of the appendix may also influence attacks of inflammation. Ransohoff calls attention to another clinical feature or cause for perityphlitis, in the occurrence of marked symptoms of intestinal obstruction. This may occur from pressure by the thickened appendix upon the ileum from below and behind. Twelve cases have been collected by him, in which perforative appendicitis produced all the manifestations of internal strangulation.

The question as to the exact seat of the several lesions, which may be embodied under the name of perityphlitis, is still under discussion.

According to Israel T. Dana,[1] inflammation *in and about* the cæcum presents itself in three clinical varieties, viz.:

"1. The body of the cæcum is the primary and essential seat of the inflammation, the appendix being invaded, if at all, only secondarily, by simple extension of inflammation along the continuous mucous membrane (typhlitis). But this, I think, should be called more properly *cæcitis*.

"2. The vermiform appendix is the primary and essential seat, the body of the cæcum often escaping altogether (appendicitis or paratyphlitis).

"3. The inflammation early invades the post-cæcal tissues, and produces a burrowing abscess (perityphlitis)."

Dr. C. Eisenlohr takes exception to a division of the several lesions in the right iliac region generally characterized by inflammation and eventual perforation of the appendix. I quote his own words:

"We must admit that the appendix is the most frequent seat for these lesions, also that obstruction and necrosis are the most frequent causes. But even the nearest sequelæ of a partial necrosis of the appendix are not explained in all their phases, either on the post-mortem table or in the living subject. Notwithstanding the fact that the researches of French and American observers during the last few years have endeavored to distinguish appendicitis from other primary perityphlitic lesions (Bucquoy and Dantel), notwithstanding that Porter has shown the effects of a perforation of the appendix into its mesentery or outside of it, a precise differentiation of all these modifications cannot be made by clinical observations."

Dr. Graser, who has made extensive studies on this subject in the clinic of Professor Heineke, at Erlangen, claims that most of the processes formerly described under the titles of typhlitis, perityphlitis, and paratyphlitis, take their origin from the vermiform appendix. The process begins by ulceration about fæcal calculi, and results in the formation of pus, with perforation; the whole process is intraperitoneal, since the vermiform appendix is entirely surrounded by peritoneum.

Dr. R. H. Fitz, in an elaborate paper, makes the attempt to define clearly the anatomical relations of pathological conditions occurring in connection with the cæcum, which have heretofore been described under terms that fail to express accurately the origin of the lesion. Ulceration and perforation of the vermiform appendix have been found, in the vast majority of cases in post-mortem examinations, to have been the origin of the perityphlitic abscesses, the cæcum being intact. He, therefore, applies the term *appendicitis* to all these lesions, to express the primary conditions and to define their origin.

Dr. William Pepper,[1] in an article read before the Philadelphia County Medical Society, divides all cases of peri-cæcal inflammation into two distinct classes:

"1. Cases where the affection is limited to the walls of the cæcum and peri-cæcal connective-tissue, with a comparatively slight affection of the appendix. Those cases are marked by pain as the initial symptom, not excruciating in character nor associated with the evidences of collapse, but often accompanied with nausea and vomiting and elevation of temperature, which continues to rise until decided fever is present. The pulse also is considerably accelerated. There exists tenderness in the right iliac fossa, a sense of fulness and induration, with dorsal decubitus and flexed thigh, generally due to a considerable fæcal impaction in the cæcum. Those cases generally end in resolution and complete recovery by the proper treatment, to wit: absolute rest, abstinence from food and strict avoidance of interference with the state of the bowels, local depletion, counter-irritation followed by the application of the ice-bag or warm fomentations, the internal use of opium and mercury, and by watching closely the convalescence and insisting on the above restrictions until the over-sensibility of the part is entirely removed.

"2. Cases which commence with a catarrhal appendicitis. Here the patient may have been apparently in almost perfect health, perforation of the appendix taking place without any perceptible previous symptoms. The fæcal matter, which is present in nearly every healthy

[1] Reference Handbook of the Medical Sciences, vol. iv.

[1] Journal of the American Medical Association, December 14, 1887.

appendix, is no longer able to circulate and escape, because the outlet is partially closed by the swelling of the mucous membrane (partial stenosis); the pent-up secretions and the irritating fæcal matter excite serious inflammation in the walls of the appendix, ulceration is established, and perforation occurs. In such cases the first symptom is excruciating, intense pain, followed by the rapid development of the signs of peritonitis. The pulse becomes frequent, there is marked tenderness, not in the iliac region only, but also toward the middle line of the abdomen, sometimes extending into the genitals, especially into the right testicle and spermatic cord. The abdomen becomes distended, though evidence of dulness or induration may be present or absent. Vomiting is rare, and only induced when the stomach is taxed. For two or three days these may be the symptoms after the subsidence of the initial pain, and there may be only a moderate febrile reaction for several days, associated with continued moderate pain, simulating an ordinary catarrhal attack with intestinal colic. The bowels are quiet; not so constipated as in typhlitis, and with less impaction of the fæces in the cæcum. After a time there appear the symptoms of a rapidly-spreading, general peritonitis. The abdomen becomes greatly distended and tender, vomiting becomes frequent, the temperature rises, the pulse becomes thready and rapid, and death from exhaustion ends the scene in five to ten days."

The most important question to be considered is, When is the earliest moment that we can establish the diagnosis between these two forms of cæcal inflammation?

The initial symptoms may give us some indication as to the seat and the gravity of the attack.

Typhlitis and perityphlitis soon offer demonstrable symptoms; but as the appendix is hidden under the intestine, the symptoms of perforative appendicitis are often obscure for several days. The most careful palpation may fail to show the slightest fulness. The patient may complain of pain over the cæcum, or over the hypogastrium, and external examination may not aid us in the diagnosis.

Pepper and Loomis speak highly of early and oft-repeated rectal examinations as the most important diagnostic means. I quote Pepper's own words:

"In such cases, if rectal digital examination should give a sense of distention of the right side of the pelvic roof, might not a puncture be made with a curved exploring-needle introduced through the rectum? In this way we might demonstrate the presence of pus, when it could not be possible to do so through the external abdominal wall."

Loomis holds, as a matter of theory, that by the careful examination of a patient, previously anæsthetized, with the index-finger of the right hand in the rectum and the left hand pressing into the right iliac fossa, evidence may be obtained to establish the diagnosis in the early stage, and so aid in determining the question of a laparotomy.

According to Joseph Ransohoff, the anatomical relations of the cæcum and the appendix alone suffice to explain certain clinical differences between inflammatory conditions of either part. The cæcum being comparatively superficial in position, and its peritoneal coat continuous with that of the iliac fossa and anterior abdominal wall, an abscess about it will speedily manifest itself by the presence of a tumor. The appendix, on the other hand, being deeply seated behind the cæcum and below the mesentery of the ileum, abscesses about it may continue for a considerable length of time without the appearance of a tumor in the right iliac fossa. The fixed position of the ileo-cæcal junction and the mesentery will often direct the progress of such an abscess toward the pelvis. Hence the great importance of rectal exploration as a diagnostic measure in cases of suspected inflammation of the appendix.

Treatment.—Fully concurring with the opinion of Dr. Murphy, that perityphlitis belongs, in the great majority of cases, to the province of surgery, I will not spend any time in recapitulating the so-called expectant, conservative plan of treatment, which consists of rest in bed, restriction of diet to nourishing liquids, hot poultices or fomentations frequently placed upon the parts, with local depletion, and hypodermic injections of morphia to control pain, to allay tenderness, to reduce abnormal peristalsis, to restrain hypersecretion, and to exercise an anti-inflammatory influence. According to Morton, the bowels should be kept open and free from accumulation of gas and fæces by the administration of salines and non-iritating enemata with the addition of some turpentine. I quote his own words:

"I would ask of those disposed to cavil at this advice, Shall we keep the bowels in liquid condition, and so prepared to best resist peritonitis, should it occur, whilst at the same time the mere draining of fluid from the intestines and surrounding parts would influence for the better the peri-cæcal inflammation? Or, shall we paralyze, and congest, and inflate the bowels by the old-fashioned 'splinting' treatment, and thus beckon on peritonitis?"

Wyeth,[1] while admitting the usefulness of laxatives in stercoral typhlitis and the early stages of typhlitis, warns us againt their use in the early stage of perityphlitis.

Thomas G. Morton,[2] in an article read before the Philadelphia County Medical Society, December 14, 1887, urges the division of the disease into a *pre-purulent* and a *post-purulent* stage. In the first, the conservative medical treatment above mentioned is resorted to; in the second, operative measures must be employed, and the perityphlitic abscess, or the post-purulent stage of perityphlitis, passes from the domain of internal medication into that of modern surgery.

The question then naturally arises, When shall we operate? Unfortunately, the acuteness or mildness

[1] Keating: Diseases of Children, vol. iii.

[2] Journal of the American Medical Association, January, 1888.

of the local or general symptoms is not an invariable index of the ultimate gravity of a given case. Sometimes fatal cases will set in with a very deceptive mildness of appearances; on the other hand, a very alarming beginning may be followed by resolution or a tractable state of affairs. According to A. G. Gerster, all therapeutic advice has only a conditional value, to be weighed and accepted or rejected by the sugeon in each separate case.

In view of the impossibility of foretelling whether, in a given case, spontaneous evacuation of the contents of an appendix or perforation will take place, and, in the latter case, whether a superficial or a deep-seated abscess will develop, and considering the fact that laparotomy followed by the excision of the appendix has yielded uniformly good results, if done before the access of perforation, it is safe to follow McBurney's advice, which consists in the performance of laparotomy and removal of the appendix, whenever severe symptoms persist and increase for more than forty-eight hours. The operation is indicated when an abscess has formed and threatening symptoms of collapse seem imminent, or when threatened perforation or intestinal obstruction appear. In most cases the operation is performed too late, or the patient is unnecessarily exposed to a long and exhausting illness. Sudden illness, with high fever, radiating pains, and increased resistance, are reliable signs for surgical interference. According to the time-honored maxim, "*Ubi pus, ibi incisio*," the lateral method, as first done by Professor Parker in 1843, is to be adopted under the strictest antiseptic measures.

When the abscess is found and opened, and the bulk of its contents has escaped, a gentle exploration by the index-finger is advisable to detect recesses or a foreign body. But all rough treatment of the walls of the cavity by scraping, tearing, or rude squeezing, is to be avoided, as it may lead to inward rupture. If the appendix is easily found, and appears necrotic or ulcerated, it should be removed. Two drainage-tubes are slipped into the cavity and fastened, for facilitating irrigation without causing undue distention. Daily change of dressings will be required for the first seven or ten days, until the discharge becomes serous and allows the removal of the tubes.

Dr. H. Kummel, of Hamburg, speaks of the treatment of a third form, the chronic relapsing form of perityphlitis. A patient who has once passed through a siege of perityphlitis is always in danger. The least error in diet, or a trauma, is likely to cause new trouble. Those which are most susceptible to relapses are the cases which do not result in the formation of abscess, but have an exudate around the appendix. The operation of removal of the appendix, as a lasting, radical cure, is to be performed after the acute symptoms have subsided, and the exudate around the appendix is resolved under the influence of ice and opium, the sheet-anchors of medicinal treatment.

The incision is made along Poupart's ligament or in the median line, the appendix being ligated close to the cæcum, and the stump closed with peritoneal suture. Only a few operations of this kind are published, so far, in literature; two have been reported by Senn, one by Treves, and two by Kümmel.

The three male subjects who fell victims to this disease in our community, a village of about 6000 inhabitants, during the past summer (May, July, September), were twenty-four, twenty-six, and thirty years old relatively, all robust and well-nourished workingmen. The disease came on in each case suddenly, and the patients and their respective relatives were rather reluctant in believing that the illness was grave and would need early surgical interference. All three consented rather late to be operated upon, after symptoms of peritonitis had fairly set in, and the cases ended in death, two dying from septic peritonitis four days after operation, the remaining one from shock six hours after operation. The appendix was found in each case perforated, and in a more or less necrotic state. The two cases which died from sepsis might have terminated in recovery, if the necessary antisepsis in all its details could have been carried out; but this is sometimes rather difficult in private practice.

Under such disadvantages, I, for my part, have concluded to remove, under all circumstances, as soon as I have established the diagnosis, any further case of perityphlitis to a well-regulated hospital for operation and treatment, and where the chances for recovery are above *par* on account of surgical cleanliness.

ORIGINAL LECTURES.

ICHTHYOSIS.

A Clinical Lecture,
delivered at St. Luke's Hospital.

BY I. N. DANFORTH, A.M., M.D.,
PROFESSOR OF CLINICAL MEDICINE IN THE CHICAGO MEDICAL COLLEGE; PROFESSOR OF RENAL DISEASES IN THE WOMAN'S MEDICAL COLLEGE OF CHICAGO.

GENTLEMEN: The first case I show you to-day illustrates a very rare variety of skin disease. I have only seen one other case like it. From the history-sheet we gather the following data: The child is twelve years of age, father living, and mother dead. Cause of mother's death unknown. She has two sisters living; one has some affection of the kidneys, the other is perfectly healthy. Two years ago last September the child had scarlet fever, from which she recovered, being sick about one month. A month or two ago she began to have epileptic seizures. In order to control the paroxysms the bromides were given. During the last two weeks

she has had only one seizure. It is not on account of epilepsy that I have brought her into the clinic, but because her case is a typical illustration of that rare form of skin disease which has been called by English writers "*ichthyosis*." It is a good case for you to study. It has been called by Wilson "*xeroderma*." The scales resemble those of a fish. The surface of the skin is dry, rough, and pearly in color. The cuticle exfoliates in fragments. The affection involves the extensor surfaces of the hands. On the flexor surfaces of the lower extremities it is quite well marked. Sometimes the skin is so peculiar in appearance that there is very little difficulty in making the diagnosis. The only mistake you are liable to make in regard to this affection is in winter time. When the skin is moist or weather cold, there is likely to appear an eczema of the skin, which we are told was present in this case when the patient was admitted into the hospital, but has disappeared under treatment. The general appearance of the lesion, however, extending, as it does, over the whole body, is enough to establish the diagnosis without any difficulty.

There are two varieties of this affection, viz., *ichthyosis diffusa*, and *ichthyosis follicularis*. These two varieties are subdivided by some English writers into *xeroderma follicularis*, *xeroderma diffusa*, *xeroderma pigmentosa*, and a half dozen others, which practically amount to nothing. There are only two varieties, and these are based upon the morbid anatomy of the disease. One variety is where the lesion begins upon, and is for a long time limited to, the surface of the skin. It does not involve the follicular structures of the skin. This is called *ichthyosis diffusa*, meaning a diffusion of the affection over the surface of the body, and this is a typical case of it. After a time it may affect the follicles of the skin. It develops usually during early infancy.

The other variety of the primary lesion is usually in the follicular appendages or hair follicles, and this variety is known as *ichthyosis follicularis*.

It is invariably a congenital affection. The child may be born with it, but if not, it develops within two to six months after birth. Hardly ever does it appear after that time. I do not think there is a case on record of the development of this disease after puberty, hence it may be regarded as congenital.

In ichthyosis the cuticle may be said to be more abundant than natural. There is an over-development of the epidermal layer.

The disease is invariably hereditary, being transmitted from parents to children. In this case, it is inherited directly through the mother, but *she* inherited it in turn from *her* mother. Another child, a sister of our patient, also has the disease.

Again, it prevails more extensively in certain regions, as, for example, South America. It is quite common in Patagonia, as well as in some of the islands of the South Pacific. Although the affection is said to be *endemic*, it is still *hereditary*, as seen in these cases.

As I have already told you, it almost always begins a month or two after birth. Sometimes the disease may remain latent for a year or two. It usually begins at the flexor surfaces of the joints, and the mother is very apt to pay little or no attention to it, supposing it to be some ordinary skin disease, such as chapping. The pearly scales fall off. The disease gradually spreads until it involves nearly the whole body. In some cases, however, only a certain area of the body is affected. It is always attended with dryness of the skin, for the reason that there is an arrest of development of the physiological power of the epidermal cells. The glands fail to secrete, so that the skin remains dry and apparently unnourished. When these lesions of the skin are once established, they are permanent.

This is the second case I have seen of the disease. The first case I saw was that of a lady, now forty years old. She has always been fairly well with the exception of this skin affection. I have known her for the past ten years, and she told me that she has never known her skin to be moist during the hottest weather. It always remains in that dry condition characteristic of the disease. The result is, that double work is thrown upon the kidneys. You are aware that there is a physiological relation between the skin and the kidneys. The skin is an adjunct to the kidneys. The skin in this case is entirely inactive, and it is not to be regarded in the light of a secretory gland. Ordinarily we look upon the skin as an active eliminating organ. Here the results are different.

In the case of the lady I speak of, the urine is constantly loaded with urinary salts or lithic acid. Five years ago she had an attack of neuralgia, hæmaturia, fever, extreme pain, etc., and was laid up in bed for two weeks. At the end of that time she passed a small calculus. These attacks have recurred every few months. She has pain, constant hæmaturia, and other symptoms indicative of calculus in the kidney. She is at present considering the advisability of an operation for the removal of the calculus. Life has become a burden to her.

This condition of things is largely due to the inactive and undeveloped condition of the skin. There is no possibility of restoring its functions.

If you take a section of the skin, and place it under the microscope, you will notice that the follicles are either undeveloped, or are dilated by the presence of a great number of dry, shrivelled, epithelial cells. In a word, these follicles are imperfectly developed.

The skin you notice in the patient before us is very dry and branny, and scales are constantly falling off. There seems to be a deficient development of the pigmentary layer, so that English writers recognize the pigmented variety where pigmentation is excessive. In the follicular variety the skin feels rough, like a nutmeg-grater; that is, the follicles become filled with a mass of dried cells which project like little horns above the surface of the skin. This peculiar appearance disappears as the rest of the skin becomes affected, but during the early stages the skin has a roughened appearance with a peculiar feel.

There are no subjective symptoms peculiar to the disease, so far as I am aware—no pain, no itching, except during very hot and oppressive weather. The lady, to whom I have referred, complains bitterly during hot weather. She cannot perspire. She gets no relief from the action of the perspiratory glands.

The history of cases like this is simply a continuation of the disease in one direction. It remains as it is. If neglected it gets worse, if treated it improves to the extent that there is some comfort afforded the patient. As

far as curing the disease is concerned, it cannot be done. We have, as yet, no therapeutic measures at our command which can restore the congenital defects of the skin.

The prognosis, so far as I know, is this: A patient is likely to live as long with ichthyosis as without it, provided no acute disease carries him away. But there is no question but what this affection increases the danger of pneumonia, rheumatism, fevers, bronchitis, etc., because we cannot thus have the benefit of the skin as an organ of elimination. You know that in patients affected with pneumonia, there is always more or less danger of nephritis, and in ichthyosis there would be the added danger due to the condition of the skin. If the skin does not act as an eliminating organ, a great deal of its work is thrown upon the kidneys, and there is constant danger of nephritis. Other than the dangers which naturally follow an arrest of development of the skin and the absence of its physiological functions, a patient is likely to live as long with this form of skin disease as without it. I do not know that it predisposes to lesions of any other organs of the body except the kidneys.

I will now say a few words with regard to the treatment. It is an incurable affection. There are no remedies which will cure a case of this kind, for the reason that we have no therapeutic measures which can develop an undeveloped organ. All we can do is to take care that other organs do not suffer or become involved.

I advise you, for one thing, to watch the condition of the kidneys. The urine of the patient should be examined every now and then, to see that the kidneys are not over-worked, for they are constantly in danger.

As to the skin, the first thing is to employ soap-and-water baths, or frictions with green soap, for removing the dead scales which are constantly accumulating. You can also keep the skin moist by the use of inunctions of some bland ointment. In my cases I have used inunctions of the oil of sweet almonds. It is a bland and mild oil, and odorless. It keeps the skin moist and supple and thereby adds to the patient's comfort.

If the skin becomes very dry it will sometimes crack about the joints, so that there will be longitudinal and transverse fissures. It is necessary to guard against this by the application of some simple inunction. Almond oil, lanolin, benzoated lard, or any other of the fat preparations which are bland and unirritating, may be employed with benefit. Vaseline is of little use. It remains a gummy mass upon the skin. Then, again, occasionally you might give the skin a bath with frictions of green or some other alkaline soap. The inunctions of ointment or oil should be as bland and unoffensive as you can make them.

A point of importance for you to remember is this: If a patient with ichthyosis has pneumonia, rheumatism, bronchitis, pleurisy, or any other acute affection, you must prognosticate accordingly. In a word, the prognosis would be more unfavorable than if the skin were in an entirely healthy condition, for reasons to which I have already alluded.

SYPHILITIC ECTHYMA.

Here is a case, gentlemen, which perplexed us a little in the matter of diagnosis. The patient was admitted into the hospital about three weeks ago as a gynecological case. At that time it was decided to have an operation performed on her, but before the operation was done she had a febrile attack, followed by an eruption on her face, mouth, body, arms, etc., which assumed very much the appearance of varioloid or chicken-pox. A physician from out of the city diagnosed the case as smallpox, so that it was for a time isolated. One or two days elapsed before I saw the case. It then had some of the characteristics of smallpox. It broke out in the form of pustules. Now and then these pustules had an umbilicated appearance, being depressed at the top. The case illustrated the fact that one who makes a diagnosis too rapidly might very easily mistake it for smallpox.

But what are the facts in the case? The patient had a vesiculo-pustular eruption with an elevated temperature, which would be hardly sufficient ground for making a diagnosis of smallpox. The girl stated that she had had smallpox or varioloid once. That statement may or may not be true; at all events, if it were true it would interfere somewhat with a diagnosis of smallpox.

In smallpox the temperature always runs higher, so far as I have been able to observe, than it did in this case. In smallpox there are rigors, headache, cough, soreness of the throat, marked bronchial irritation, and, more than all, there is pronounced lumbar pain, which, in many instances, is the first symptom of which patients speak. In all my experience with smallpox the first symptoms they complain of is an intense backache. I have seen cases repeatedly where an intense backache, not preceded by any eruption, has led me to suspect smallpox, and further investigation has proved it to be so. Pronounced backache, then, may be regarded as one of the diagnostic symptoms of smallpox. If a patient has an eruption, and that symptom is absent, you may be reasonably certain that it is not a case of smallpox with which you are dealing.

If you examine closely the pustules you will find that they are not typical of smallpox. In smallpox the pustules are nearly all alike, but in this case they differ in size, form, height, appearance, and termination, and they do not pursue the same course. The absence of backache and the atypical character of the eruption are against smallpox.

The subsequent history of the case led me to the conclusion that I had to deal with a specific eruption. I will not go into the details of that history at the present time. A diagnosis of syphilitic ecthyma was made. It is a rare case, and a typical illustration of the disease. It is an interesting case to study.

The treatment would be the same as for any other specific lesion.

HOSPITAL NOTES.

WOMAN'S HOSPITAL OF PHILADELPHIA.

SURGICAL CLINIC OF DR. JOHN B. ROBERTS.

Reported by MARY E. ALLEN, M.D.,
DEMONSTRATOR OF SURGERY.

Radical Operation for Scrotal Hernia at the Age of Four Months.—L. B., a boy of four months, was admitted to

the Woman's Hospital of Philadelphia December 19, 1889, on account of a very large congenital scrotal hernia, complicated with phimosis. The scrotum, when the hernia was forced down by crying, was about as large as a fist, and the penis was buried in the mass, looking like a sort of dimple on its surface. At other times the hernia was not quite so large, but was unusually bulky for so young a patient. The child's family history was good, both parents being living and healthy. The patient was also in good condition, with the exception of the trouble mentioned. Dr. Roberts stated that he was not inclined to attempt the radical cure of non-strangulated hernia as often as some surgeons, because he believed the slight risk of operation was unjustifiable in many of the troublesome hernial protrusions; and because the radical cure was often radical in name only. As there was every prospect that this enormous hernia would still further increase in size with age, it was decided to undertake an operation which, if it did not produce a radical cure, would at least diminish the size of the ring and permit subsequent treatment with a truss. The phimosis was to be operated on at the same time, as the straining in urination was evidently a cause tending to increase the hernia, if indeed it was not the original exciting cause of the intestine being forced down through the unsealed inguinal canal. The hernia was evidently of the congenital form—no true hernial sac, but the intestine lay in the tunica vaginalis testis.

On December 20th the patient was etherized for operation. He took the ether poorly, but without any bad effects. The incision for the herniotomy was made in an oblique line over the scrotum, the external abdominal ring and inguinal canal, and was nearly three inches in length. This was done while the tip of the forefinger of the operator's left hand was held in the external ring, having been placed there by invaginating the integument of the scrotum. This was done to prevent the reduced intestine from descending through the ring. The ring was half an inch in diameter—enormous in an infant of four months. After the hernia was thus reduced and retained by the finger, and the primary incision made, the canal was opened up to the internal ring. As there was no hernial sac proper here, the operator had nothing with which to plug the external ring and canal, and had to be content, therefore, with attempting occlusion of the passage, through which extrusion occurred, by simply suturing the walls of the canal and margins of the rings together. This was done as thoroughly as possible with sutures of catgut and silk, carried by means of a curved cervix needle. Obliteration of the ring and canal, so far as could be done without injury to the cord, was accomplished; and the hernia thus well retained within the abdomen. Some sutures were also applied to the upper part of the vaginal tunic of the testicle where it was continued upward as a patent canal, communicating with the peritoneal sac, in which the hernia had lain. The fascia and integument were sutured separately, and a few strands of catgut laid in the lower angle of the wound for drainage.

The phimosis was then operated upon by slitting the prepuce up on the dorsum and subsequently cutting away the redundant integument and mucous membrane, and suturing these two structures together with catgut around the circumference of the glans penis. Dry antiseptic dressings were then applied, both to the hernial wound and to the penis. The temperature after the operation was 101°, and remained elevated for the first three days. Two and a half grains of quinia sulphate in suppository, and five drops of sweet spirits of nitre were given every four hours to lower the temperature. This treatment was discontinued on the sixth day.

The dressings required frequent changing, because it was impossible to prevent access of urine to the region of the herniotomy, though vigorous attempts were made by covering the dressings with rubber tissue. Everything went well until the seventh day after operation, when the child began to show the first symptoms of influenza, which was then prevailing as an epidemic in the city. He had a slight diarrhœa and some coryza. On the eighth day, the temperature being still normal, the stitches were removed from the site of the hernial operation, when union was found to be good, and but a single drop of pus appeared, at the upper angle. Subsequently there was a further discharge, but it never occurred in any considerable quantity. The influenza, however, went on increasing, until by the tenth day severe bronchitis developed, and threatened the life of the child. The chest was rubbed with a liniment of yolk of egg, turpentine and vinegar; and 1 grain of chloride of ammonium, 5 drops of syrup of ipecac, 5 drops of sweet spirits of nitre, and 10 drops of syrup of senega were given every two hours as a cough mixture. The 2½ grain suppositories of quinia were also resumed, and a jacket poultice of wool placed upon the chest. By the eleventh day symptoms similar to those of meningitis developed, and added to the gravity of the case. The pupil of the right eye was markedly contracted and brows drawn; there was constant motion of the head and extreme restlessness, with a cry of pain. The temperature by this time was 104.4°. A warm bath was given, and cold water dashed on the breast to deepen the breathing, and cold was applied to the head. This was repeated several times during the day, and after the bath mustard was applied to the spine, behind the ears, and around the ankles. Two grains of bromide of potassium was given every two hours in anise water. The temperature was still high, 105.4°. The child continued very ill for nearly a week longer. One grain of iodide of potassium was added to 3 grains of bromide of potassium every two hours, and continued until improvement commenced. Later, 5 drops of syrupus ferri iodidi, three times a day, were administered, and the child rapidly convalesced. The hernial wound did well, and by January 9th, when the patient had recovered from the influenza, was entirely healed, retaining the bowel perfectly within the abdominal cavity. The wound made by the operation of circumcision did well also.

When the child was last seen, a week or ten days after leaving the hospital, the hernia was still undescended. Dr. Roberts advised that a spica bandage of the groin be continued until the firmness of the cicatrix was greater. He spoke of the probability of the hernia recurring, but believed that even in such a case the tumor would be small and manageable by a truss. The recovery of the child after such a severe attack of epidemic influenza, superadded to the operations was, in his opinion, principally due to the unremitting efforts of Dr. Fullerton, the physician in charge of the hospital.

MEDICAL PROGRESS.

Stricture of the Urethra.—J. WILLIAM WHITE reaches the following conclusions:

1. Strictures of large calibre, that is, of more than 15 French, situated at or behind the bulbo-membranous urethra, are to be treated, almost without exception, by gradual dilatation.

2. Strictures of large calibre occupying the pendulous urethra are to be treated by gradual dilatation when very recent and soft, and by internal urethrotomy when of longer standing, distinctly fibrous in character or non-dilatable. It is to be remembered that the great majority of so-called strictures of large calibre of the pendulous urethra are merely points of physiological narrowing.

3. Strictures of the meatus and of the neighborhood of the fossa navicularis should be divided upon the floor of the urethra whenever it is evident that they are real pathological conditions producing definite symptoms and not normal points of narrowing.

4. Strictures of small calibre (less than 15 French), situated in advance of the bulbo-membranous junction, unless seen very early and found to be unusually soft and dilatable, furnish the typical condition for internal urethrotomy, which should be done preferably with a dilating urethrotome and, invariably, with all possible antiseptic precautions.

5. Strictures of small calibre (less than 15 French), situated at, or deeper than, the bulbo-membranous junction, should be treated whenever possible by gradual dilatation. In a case of resilient, irritable or traumatic stricture in this region, or of stricture which, for any reason (as the occurrence of rigors), is non-dilatable, external perineal urethrotomy is the operation of choice.

6. Strictures of the deep urethra, permeable only to filiform bougies, should be treated by gradual dilatation when possible, the filiform being left *in situ* for some time, and followed by the introduction of others, or used as a guide for a tunneled catheter. If the stricture be not suitable for dilatation, external perineal urethrotomy should be performed.

7. Impassable strictures of the deep urethra always require the performance of perineal section.—*University Medical Magaziue*, March, 1891.

Ointment for Acne.—*L' Union Médicale* states that ISAAC uses the following prescription in acne:

℞.—Resorcin	½ to 1 drachm.
Powdered oxide of zinc, Powdered starch	of each 1 drachm.
Vaseline	2 drachms.

This is to be applied day and night to the affected part. If it is not desired to apply it during the daytime, it may be removed by the aid of olive oil and soap and followed by an inert absorbent powder.

Treatment of Alopecia.—MONIN recommends the following treatment of alopecia:

℞.—Gallic acid	45 grains.
Olive oil	6 drachms.
Vaseline	1½ ounces.
Essence of lavender	15 drops.

This is to be made into an ointment and applied with friction to the part affected morning and night for the arrest of the disease.—*L' Union Médicale.*

Treatment of Laryngitis.—MOURE recommends the following to be used in the treatment of laryngitis:

℞.—Crystallized carbolic acid	7–15 grains.
Hydrochlorate of cocaine	7 "
Opium	1½ ounces.
Distilled water	10 "

This may be applied by means of a brush three times a day, or

℞.—Boric acid	1 drachm.
Crystallized resorcin	½ "
Cherry-laurel water	1½ ounces.
Distilled water	10 "

This mixture may be used in an atomizer for from three to five minutes morning and night, or three or four times a day if the condition of the throat is subacutely affected.—*La Tribune Médicale.*

Treatment of Acne.—CAPOZI recommends in the treatment of acne the following solution:

℞.—Washed and precipitated sulphur, Powdered glycerin, Carbonate of potassium, Cherry-laurel water, Alcohol	of each 2½ drachms.

After thoroughly washing the part which is affected this mixture is to be applied at night, and may be replaced by an application of oxide-of-zinc ointment or glycerin.

Treatment of Diarrhœa by Salol.—MONCORVO has published an interesting paper concerning the use of salol in infantile diarrhœa. He considers it an exceedingly useful agent in the production of intestinal antisepsis in infants who are affected with enteritis or entero-colitis. The passages rapidly diminish in number under the influence of the drug and lose their disagreeable odor a few days after administration. The flatus which arises from intestinal fermentation is decreased by the action of the salol. He thinks that the drug may be used with advantage in infants of all ages, and that it is very rare for it to produce any untoward effects. The dose which he employed was from 2 to 30 grains in twenty-four hours, according to the age and gravity of the case.—*Revue Internationale de Bibliographie Médicale.*

The Treatment of Cardiac Asthma.—*The Journal de Médecine de Paris* gives the following treatment of FERRAND for cardiac asthma, which is divided into several parts. The general treatment consists in the administration of 2 teaspoonfuls of the following solution every morning:

.—Iodide of sodium	6 drachms.
Infusion of inula	10 ounces.

At night, after supper, two tablespoonfuls of a solution

of bromide of sodium and aconite are to be given, made as follows:

℞.—Bromide of sodium . . 6 drachms.
Tincture of aconite . . . 16 drops.
Infusion of hops . . . 8 ounces.

The treatment of an attack of asthma is to inspire steam arising from a vessel of hot water, and if possible containing the fumes of ammonium. 5 drops of the following mixture may be given every five or ten minutes:

℞.—Laudanum . . . . 1 drachm.
Cherry-laurel water . . 1½ drachms.

At the same time a subcutaneous injection of the following will be found of advantage:

℞.—Sulphate of atropine . . . $\frac{1}{10}$ grain.
Sulphate of morphine . . 3 grains.
Cherry-laurel water . . . 2½ drachms.

Twenty minims of this may be injected at a time. After the attack has passed by, the following may be given:

℞.—Extract of stramonium, Valerianate of zinc } of each 1 grain.

Treatment of Coryza.—In the treatment of coryza Kola recommends that a teaspoonful of powdered camphor be added to a pitcher of boiling water, and that a cone of paper be placed over the mouth of the vessel, the other end of the cone being placed over the nose and mouth of the patient. The vapor which arises from the water is charged with the camphor, and may be inhaled for from five to ten minutes. Three inhalations are usually sufficient to arrest the most rebellious coryza. These inhalations provoke a most abundant secretion from the nasal and pharyngeal mucous membrane, and exert a favorable effect upon the inflamed parts.—*L'Union Médicale.*

Hæmoglobinuria from the Use of Quinine.—The *Revue Internationale de Bibliographie Médicale* states that Coromilais has recently observed six cases of hæmoglobinuria due to the ingestion of sulphate of quinine, thereby confirming the earlier observations of Beretas regarding the so-called hæmaturia produced by this drug.

Trichloracetic Acid as a Caustic.—This acid has been largely employed by Ehrmann in the treatment of maladies of the nose and throat. A crystal of the acid may be applied to the part affected, when it forms a white scab, which is rapidly detached. From an experience with 140 cases Ehrmann concludes that this acid occupies the first rank in the treatment of maladies of the nose and pharynx. It may be used with great advantage with an astringent, and the following formula is recommended by the writer:

℞.—Iodine . . . . . 4 drachms.
Iodide of potassium . . 5 "
Trichloracetic acid . . 4 to 8 "
Glycerin . . . . . 8 "

Apply to the part with a tampon.

One drop of this solution is not disagreeable, and it is followed by very little pain. In the treatment of follicular tonsillitis Ehrmann found it to produce a cure after three applications, and in two cases of ozæna the effects were very good indeed. Among fourteen cases of chronic pharyngitis there were eight cures and six notable ameliorations. A number of other instances are given in which equally good results were obtained —*L'Union Médicale.*

Pills for Dysentery.—The following pills used in the treatment of dysentery have given satisfactory results:

℞.—Powdered ipecac . . . 4 grains.
Calomel . . . . . 1½ "
Extract of opium . . . 1 grain.

Make into three pills, and give one each hour, in the treatment of diarrhœa or dysentery due to exposure to heat.

Treatment of Sciatica.—Jaccoud gives the following treatment for cases of sciatica. During the acute period severe counter-irritation or local depletion may be resorted to over the affected limb and hypodermic injections of morphine are to be given. If anæmia is present to any great degree severe vesication is not to be applied. If the disease is due to rheumatism it should be treated by the internal administration of salicylate of sodium given in the dose of from ½ to 1 drachm a day. Other cases may require large doses of quinine. Jaccoud prescribes the hydrobromate of quinine in the dose of 15 to 30 grains a day, and continues it until the symptoms of its physiological action become manifest. In this case the treatment is suspended for one or two days and then begun again. When sciatica passes into a chronic state in which it recurs, it is best to administer a mixture containing iodide and bromide of potassium in the dose of from ½ to 1 drachm each to be dissolved in a suitable vehicle, such as sarsaparilla. Externally resorcin may be resorted to and simple vapor baths or turpentine vapor baths may be used. The pain may be relieved by morphine.—*L'Union Médicale.*

The Treatment of Phthiriasis Pubis.—Fournier in *L'Union Médicale* gives the following applications for the treatment of this troublesome condition:

℞.—Distilled water . . . . 12 ounces.
Alcohol . . . . . 3 "
Corrosive sublimate . . . 15 grains.

Or,

℞.—Vinegar . . . . . 9 ounces.
Corrosive sublimate . . . 15 grains.

Add to double this quantity of water and apply as a lotion. Sometimes applications of oil with beta-naphthol may be employed.

Iodo-carvacrol, a New Antiseptic.—This preparation, which is isomeric with thymol, is formed from carvol, a derivative from caraway, dill and mentha crispa. Just as thymol, treated with iodine and iodide of potassium in the presence of an alkali yields aristol, so carvacrol similarly treated forms a yellow-brown precipitate which can be reduced to the form of a powder. This is called iodo-carvacrol and is available for the same therapeutic purposes as aristol.

Antiseptic Application for Diphtheria. — LE GENDRE recommends the employment of

℞.—Borate of sodium Chlorate of potassium	} of each	1 drachm.
Carbolic acid		3 grains.
Glycerin		2½ drachms.
White honey		1 ounce.

The mixture is to be applied to the portion of the throat which is involved in the disease by means of a camel's-hair brush.—*La Tribune Médicale*, February 5, 1891.

Abortive Treatment of Herpes.—In those persons in whom herpes occurs periodically and produces much pain and discomfort LELOIR recommends the employment of resorcin, thymol, or menthol in one of the following solutions:

℞.—Resorcin	30 grains.
Alcohol	3 ounces.

Or,

℞.—Menthol	30 grains.
Alcohol	4 ounces.

If the pain following this application is very severe, the following formula may be employed in place of the other two:

℞.—Hydrochlorate of cocaine	15 grains.
Extract of cannabis indica	2½ drachms.
Essence of peppermint	2½ "
Alcohol	4 ounces.

It is also well to cover the sore spot with some impermeable dressing, in order to protect it from the air.—*Gazette Hôpitaux de Paris*, December 18, 1890.

Treatment of the Vomiting of Pregnancy.—The *Deutsche medicinische Wochenschrift* recommends the following treatment for vomiting of pregnancy:

℞.—Creasote	10 drops.
Acetic acid	20 "
Sulphate of morphine	1 grain.
Distilled water	1 ounce.

A small teaspoonful every half-hour until four doses have been taken.

Treatment of Effusion in the Knee-joint.—In the London *Practitioner* for February, 1891, OWEN describes his treatment for effusion into the knee-joint. He says:

In some instances the aspirator was employed, but in others the distended joint was dealt with by a hydrocele canula of about the gauge of a No. 1 English catheter. In the use of either instrument the surgeon must take care that it is aseptic, and that the skin through which it is to be introduced is not only "cleansed" but clean. Moreover, he must not operate with "unwashen hands." Another point to be attended to when using the canula is that just as the fluid is ceasing to flow the surgeon should block the end of the instrument with his finger, and so withdraw it that he does not introduce air into the joint.

A canula thus used is as safe as an aspirator, and it has this recommendation, that it is sure to be in working order. If an ordinary canula and trocar cannot be used with security, peritoneal cavities, ovarian cysts, and vaginal tunics should have been in the habit of suppurating. This we know is not the case. It is very much the fashion now, however, to drop the simple word "tapping," or its equivalent "paracentesis," and, with a homage to euphemism, to employ the term "aspiration."

To the practitioner it matters not whether the fluid is blood or sero-synovia. He has merely to obey the indication. If the joint has begun to swell up directly after the injury, the distending fluid must be blood; but if a day or more have intervened between the hurt and the swelling, the fluid has been poured out by the inflamed synovial membrane. Such fluid is a mixture of synovia with serum; often it is stained with blood.

Dr. Owen has never known any trouble to follow the tapping of a joint; he adopts it as a routine treatment in the case of fracture of the patella as well as in the more simple variety of distention.

As a rule, the puncture is made to one side of the patella. When withdrawing the canula the track is obliterated by firm pressure with the finger. The skin puncture is covered with a scrap of lint dipped in collodion, or by a little pad of dry wool. The knee, together with the upper half of the leg and the lower half of the thigh, is then enclosed in lateral splints of house-flannel and plaster-of-Paris. The limb is fixed in the extended position, the foot being slightly raised. The firm pressure which is made around the joint is comforting, and it effectually prevents further effusion into the synovial membrane.

Having watched the effect of this method of treatment, Dr. Owen can honestly say that, should he have the bad luck to be the subject of acute traumatic hæmarthrosis or sero-synovial effusion of the knee, he would most certainly have the joint treated in the manner described. And he should ask that the site of puncture might be first numbed by the application of a piece of ice and some salt.

Treatment for Gonorrhœa.—

℞.—Opium	7 grains.
Acacia	7 "
Saffron	15 "
Boiling water	5 ounces.

Make an infusion, filter, and add

℞.—Acetate of lead	20 grains.
Sulphate of zinc	45 "

Use as an infusion in the later stages of gonorrhœa. In place of this the following may be employed:

℞.—Pyridine	6 to 8 drops.
Distilled water	2½ ounces.

Use three to four injections of this a day.

Treatment of Seborrhœic Eczema.—DUBREUILH states that this affection, which is difficult of treatment, will yield to the following application, if made twice a day:

℞.—Oxide of zinc	2 drachms.
Washed sulphur	1 drachm.
Salicylic acid	15 grains.
Vaseline	1 ounce.

CURRENT LITERATURE.

SATURDAY, APRIL 11, 1891.

SYRINGO-MYELIA.

Charcot and Brissaud (*Le Progrès Médical*, January 24, 1891) report a case of peculiar interest. The patient fifteen years ago, at that time twenty-five years of age, visited Professor Charcot for a nervous affection giving rise to an incoördination in the gait and a feebleness of the entire left side of the body. There was an incoherence in his movements, together with great increase in the patellar reflex, and associated with these were painful cramps in the lumbar region, extending across the abdomen in the direction of the psoas muscle and down the inner face of the thigh and the anterior surface of the leg. The action of the adductors of the thigh and extensors of the foot was so exaggerated that the patient walked upon the external border of the foot. The limb was absolutely rigid and his gait resembled an infantile hemiplegia complicated with a certain degree of athetosis. The patient came of a family whose male members were in robust health, and from this fact, together with the symptoms he presented, it was evident that his disease had nothing in common with tabes. Charcot decided that he had a spasmodic spinal affection, the origin of which he could not determine, but that the affection was certainly not tabes. Hydro-therapeutic treatment was instituted and followed with some regularity for six months. Then the patient, who was an officer in the army, rejoined his regiment, and Charcot lost sight of him.

Fifteen years later, in September, 1890, the same man again consulted the Professor. To the spasmodic hemiplegia, which had formerly been his whole complaint, were now added various nervous manifestations which formed a very complex condition. The contracture due to the spasmodic condition was very pronounced in the arm and leg, but more so in the leg. While walking the forearm was semi-flexed, the leg stiff, moving as one piece, and oscillating from side to side, and the foot rested upon the external border rather than upon the sole. The toes were elevated, the plantar surface facing internally. There existed a slight lumbar scoliosis, with the concavity turned to the left. The patellar and olecranon reflexes were greatly exaggerated. The spinal epilepsy once provoked, persisted indefinitely. The plantar reflexes were also exaggerated. The movements of the left arm and shoulder were very limited, the member, with the exception of the hand, being almost completely impotent. The entire right side was normal. Upon neither side did a muscular atrophy, properly speaking, exist, but the muscles of the left side were not so well developed as were the right. There were no fibrillar tremblings. The cutaneous sensibility was intact upon both sides, while the thermic sensibility, both for heat and cold, was almost totally abolished *upon the entire left half of the body, including the face, the tongue, and the pharynx.* The patient was unable to perceive very high or very low temperatures. The sensorial sensibilities were intact. The analgesia and thermo-anæsthesia dated from 1882, and only had therefore eight years of existence. The left hand in its entirety was much more voluminous than the right—it was large, thick, and flat, without having increased in length. The fingers were voluminous and bloated; the skin rugous; the folds of the palmar surface deepened. The whole appearance of the hand approached the type of acromegalia. The metacarpo-phalangeal and phalangeal articulations were sensibly hypertrophied, the fingers not being uniformly cylindrical. These multiple unilateral arthropathies, limited to the left hand, were of trophic origin. Such was the condition of the patient at the time of his second visit in 1890.

The significance of this case is very important. It would appear from this history that syringo-myelia may, during a long period of years, present itself under the form of a *pure and simple spasmodic hemiplegia.* Such a condition has not, as yet, to the author's knowledge, been noted.

THE RECENT RESEARCHES IN DIPHTHERIA.

Among infectious diseases diphtheria is the one which during the last two years has been most thoroughly investigated. The specific cause of the disease has been discovered, its biological properties studied, the poison isolated, and its mode of action determined. Klebs, in 1883, was the first to note the existence of a specific bacillus in the diphtheritic false membrane and upon the surface of the subjacent mucous membrane; but it was not until 1884 that Löffler studied the bacillus and its actions most completely. He, however, did not pronounce himself in favor of the specificity of the bacillus, for three reasons: the absence of paralysis after positive inoculations, the presence of a similar bacillus in the mouth of a healthy child, and the absence of the specific bacillus in several typical cases of diphtheria. Such was the state of the question when it was taken up by Roux and Yersin (1888 to 1890), who have definitely demonstrated the specificity of the Klebs-Löffler bacillus. As to the existence of the pseudo-diphtheritic bacillus, these investigators pronounce in favor of an affinity between the two bacilli, one of which becomes virulent only under certain conditions. The reasons upon which they base their belief are the following: The pseudo-diphtheritic bacillus exists in the mouths of healthy individuals and of those who have non-diphtheritic angina. But this non-virulent bacillus, which is very rare in fatal diphtheria, is most abundant in benign diphtheria, becoming more common in proportion as severe diphtheria approaches a cure, and in the latter case is more numerous than in the mouth of a healthy person. These facts show, then, that there is a direct relation between the two bacilli, of which the one does not exist in the attenuated form of the other. This hypothesis appears much more probable, since the cultures of the pseudo-diphtheritic bacillus possess certain pathogenic properties, and provoke œdema more or less considerable, according to the nature of the animal.

The bacillus of Klebs is ordinarily found upon the free surface of the false membrane; but in some cases the most superficial layer of the membrane is covered by divers microbes, rods, micrococci, and chains, mixed with masses of the Klebs bacillus, which are, on the contrary, predominant immediately below. These bacilli are colored blue by methyl, rapidly coagulate serum at a temperature of 33° C., and more slowly nutritive gelatin, where they take a characteristic appearance. The bacillus is nearly the length of the bacillus tuberculosis, but thicker, its extremities are rounded and take the blue color more vividly than the central portion. It is immobile and exists in great numbers. After some days of culture the medium, formerly alkaline, becomes acid; this acidity persists for a long time, and is then replaced by an alkaline reaction. It preserves its vitality during a long time, and at the end of five months can be revived if kept at a temperature of 33° C. Dried and kept at this temperature it succumbs at the end of three or four months. The false membrane preserves its virulence after five months of desiccation; exposed to the sun and rain the membrane becomes sterile in one or two months. These facts are very important from a practical point of view, and explain certain cases of apparently spontaneous diphtheria.

The bacillus of Klebs, or the diphtheritic virus, when placed in contact with healthy mucous membrane does not provoke diphtheria; but a single lesion, a slight erosion, is sufficient for the infection to take place. The morbidity and the mortality also of diphtheria rise rapidly during the cold seasons. The mortality is particularly high in countries exposed to abrupt changes in temperature. As to the action of the diphtheritic bacillus in producing the disease, Klebs, Löffler, Roux, and Yersin, as well as others, have remarked that the bacillus does not invade the organs, is never found in the blood of patients or of inoculated animals, and remains confined to the primary false membrane. It is not, therefore, the bacillus itself which gives rise to the grave accidents which characterize diphtheria and its poisoning. It is evident that the morbid symptoms are produced by a poison secreted at the point of infection by the bacillus, which, taken up by the general circulation, may be carried into the tissues of the organism. This idea, started by Löffler, who considered the poison as a diastase or enzyme, was also expressed by Roux and Yersin. They pronounce in favor of the poison being a diastase, and have secured it nearly in a state of purity by means of the dialyzer. The researches of Babés in 1890 have confirmed all that Roux and Yersin have advanced. Carried by the cells and the liquids of the organism, the poison forms in the depth of the mucous and sub-mucous tissues similar nests to those upon the surface, and gives rise in this way to the various phenomena of the disease.

By daily microscopical examination of the false membrane it is possible to note the progress of any case of diphtheria toward a cure, as shown by a decrease in the number of the Klebs bacilli present. As regards treatment, cauterization of the membrane with a strong solution of phenol, washes for the mouth, and gargles, will avail most in arresting the infection of the organism.—ROMME, in *La Tribune Médicale*, January 29, 1891.

DISSOCIATION OF THERMIC SENSIBILITY IN SYRINGO-MYELIA.

IN *La Médecine Moderne*, February 5th, DEJERINE and THUILANT report a case of syringo-myelia occurring in a man thirty-four years of age, who presented a spasmodic paraplegia and atrophy of the muscles of the left hand and forearm, associated with fugitive pains in the lower limbs. There was a hyperostosis of the left olecranon, with diminution in the faradic and galvanic contractility of the muscles of the arm, without the reaction of degeneration. There was absolute integrity of the tactile sensibility of the entire cutaneous surface, as well as of the sensation of pain. There was complete sensibility for all temperatures below 20° C. upon the entire surface of the body, but by the skin of the upper extremities and of the trunk high temperatures could not be detected. Severe burns could be inflicted upon these portions of the body without the patient having any knowledge of the injury. In the other portions of the body the sensibility to heat was preserved. The insensibility to heat in the upper portion of the body acquired its maximum intensity in the hands, especially upon the palmar surfaces, in the forearms, and in the lower half of the arm.

The patient dying, soon after admission to the ward of the hospital, from an advanced tuberculosis of the lungs, an autopsy was performed thirty hours after death. An extreme flattening of the spinal cord was noted, extending from the first cervical portion to the level of the lumbar enlargement, the cord resembling a flattened ribbon. A cavity of large dimensions extended the entire length of the cord to the lumbar enlargement, where it diminished, and at this level small gliomata jutted out into the centre of the cord. There was a slight neuritis of the cutaneous nerves of the forearm, and intense neuritis of the muscular nerves corresponding to the atrophied muscles.

This case is of special interest clinically, from the proof which it gives of the possibility of encountering in the course of syringo-myelia a separation in the thermic sensibility, the sensibility to cold being preserved, while that to heat or high temperature is lost. It will be interesting to seek in the future, in analogous cases, for the opposite condition, the loss of the sense of cold, with the preservation of the power to distinguish high temperatures. From a physiological point of view the case reported sustains the opinion of those authors who admit the existence in the spinal cord of special conducting fibres for heat and for cold.

CORRESPONDENCE.

OLIVE OIL, OR COTTON-SEED OIL, IN GALL-STONE COLIC.

To the Editor of THE MEDICAL NEWS,

SIR: Having given the subject of the use of olive oil in the treatment of gall-stones some thought, I have

been especially interested in your editorial in the issue of March 14th. You express some surprise that Dr. Stewart's theory did not receive mention in the recent discussion by the North Carolina Medical Society. In my "Report on Practice of Medicine" submitted to the last annual meeting of the Virginia State Medical Society, published in the volume of *Transactions* for 1890, you will find the following reference and criticism:

"DR. David D. Stewart, of Jefferson Medical College, thus explains the action of olive oil or cotton-seed oil in gall-stone colic: The pancreatic juice, by means of the fat-splitting ferment, steapsin, decomposes the oil in the duodenum into fatty acids and glycerin. The glycerin acts on the duodenum in the same way in which it affects the rectum when used by enema, withdrawing water, and causing hyperæmia and irritation of the afferent nerves of the part with which it comes in contact, thus leading to powerful reflex peristalsis. This irritation would also cause reflex contraction of the gall-bladder, cystic and common bile-ducts, thus promoting the expulsion of stones sufficiently small. The diffusibility of glycerin would also enable it to enter the gall-bladder and ducts leading therefrom, and produce similar depletion of the vessels there, locally, and reflexly promote contraction of muscular fibres. A copious outflow of diluted bile would also promote the dislodgment of stones. No satisfactory explanation has heretofore been offered as to the efficiency of the oil; and as it seems probable that glycerin can produce the effect now under consideration, it is likely that it is caused by it. If this can be proven, yet the oil would have to be given, as the hygroscopic properties of glycerin would cause its dilution if given by the mouth, so that it would be too weak by the time it reached the duodenum.

"To prevent the nausea and difficulty in retaining the oil, he uses, half an hour beforehand, the following:

℞.—Cocaine. . . . . ⅓ grain.
Comp. tr. cardamoms } of each 10 minims.
Spts. chloroform }

"There are several objections to this theory. It seems to take too much for granted. The physiological explanation may be all right so far as it goes. The main difficulty is the promptness of relief and the size of the dose. Just how much of the oil would have to undergo the change spoken of, we do not know; but is the interval of half to three-quarters of an hour that elapses before relief is experienced, long enough for it to be accomplished? It is given, too, in such doses that quantities of it appear in the stools unchanged. If glycerin given by the mouth would be so diluted before reaching the duodenum as to be of no service, the bulk of the oil would interfere with its action when formed from it by pancreatic juice. Beside that, the pancreatic juice itself would be so diluted with the oil, that we believe its effect would be scarcely perceptible in the time stated. We certainly do not believe that it can in so short a time split up *enough* of the oil into glycerin and fatty acids as to cause the unusual irritant and local reflex action described above. The theory, however, is an ingenious one, and well worthy of consideration."

TRANSMISSION OF DIPHTHERIA FROM BIRDS TO MAN.

To the Editor of THE MEDICAL NEWS:

SIR: In the May issue of the *Annual of the Universal Medical Sciences*, an article clipped from the *British Medical Journal*, from the pen of M. Jules Menard, appears, relating to the transmission of diphtheria from birds to man, wherein the author asserts that the disease is never transmitted from one to the other. To use his own words: "There is no analogy between that form of diphtheria (which affects birds) and the disease as it affects human beings."

I wish to report a case which occurred recently in my own practice which, I think, demonstrates quite conclusively that the disease is sometimes transmitted from man to birds, if not from birds to man:

On November 16th, during an epidemic of diphtheria in this city, C. D., aged three years, was attacked by the disease. Under the usual treatment the child made a good recovery. On November 23d, seven days after the child became sick, a red-bird, which was confined in its cage in the same room with the child, sickened with all the symptoms of diphtheria, and the following day a canary, whose cage hung beside that of the red-bird, was attacked in the same manner. On the following day both birds died. Now the question arises, Was this a case of "bird diphtheria" (so-called), developing spontaneously during the time the child was affected, or was it due to direct transmission of the disease from the child to the birds? I am inclined to the latter opinion.

F. HORTON, M.D.

NEWCASTLE, WYO.

NEWS ITEMS.

Iowa State Medical Society.—The fortieth annual meeting of the Iowa State Medical Society will be held at Waterloo on Wednesday, Thursday, and Friday, April 15th, 16th, and 17th, under the Presidency of Dr. W. D. Middleton, of Davenport, Iowa. A cordial invitation is extended to members of the profession to attend the meeting.

Medical Ignorance.—The following clipping from the Elk Hart (Indiana) *Review* has been sent to this office:

One of our physicians recently received the following letter from a country physician (?): "Dear dock I hav a pashunt whos phisicol sines shoes that the windpipe has ulcarated of, and his lung have drop intoo his stumick. he is unabel to swoller and I feer his stumick tube is gon. I hav giv hym evry thing without efeckt. his father is welthy Onerable and influenshial. he is an activ membber off the M. E Chirsch and god nose I dont want too loose hym. what shal I due. ans buy returne male. yours in neede."

Mississippi Valley Medical Association.—The Mississippi Valley Medical Association will hold its seventeenth annual session at St. Louis Wednesday, Thursday, and Friday, October 14, 15, and 16, 1891. A large attendance, a valuable programme, and a good time are expected. Members of the medical profession are respectfully invited to attend.

The following officers have charge of the meeting: C. H. Hughes, M.D., President; E. S. McKee, M.D., Secretary; I. N. Love, M.D., Chairman of Committee of Arrangements.

Association of American Physicians of Berlin.—About forty American physicians held a meeting on February 19, 1891, at Berlin, in order to found a permanent organization, such as exists in Paris, London, Edinburgh, and Vienna.

Professor Miller, now Professor at the University of Berlin, called especial attention to the fact that such an organization would not only greatly benefit the physicians who remain here for purposes of study, but also that it would call the attention of Germany to the forward tendency of American medical science. He strongly urged the publication of the *Transactions* of the Association every year.

A permanent organization was effected—Dr. Judson Daland, of Philadelphia, being elected as President, and Dr. F. Weber, of Milwaukee, as Secretary.

Professor Miller, Dr. Amos, of Iowa; Dr. H. Douglas, of New York; and the President and Secretary were elected as a Committee on Constitution.

As a Committee on Information to New-comers and on Organization of Special Private Courses, Dr. H. T. Brooks, of New York City; Dr. Louis Frank, of Louisville; Dr. Crystal, of Baltimore; Dr. Neal Mitchell, of Florida; Dr. Marple, of New York; and Dr. Kennedy, of Montreal, were appointed.

The objects and scope of the Society, as set forth in the preamble, are:

First. The arrangement of medical work and the formation of special private courses so that any desired instruction may henceforth be obtainable at this University.

Second. The giving of advice to new-comers regarding instruction, lodging, books, instruments, etc.

Third. The reading and discussion of papers of general interest, exhibition of patients, and demonstrations of specimens in all lines of work taken up by members.

Fourth. The furthering of mutual ends by a more extended acquaintance of the physicians here.

The Society at its first session listened to an interesting demonstration of specimens of myocarditis segmentaire, and of a blood-cyst of the aortic valve by Dr. Henry Douglas, of New York City. Dr. Weber then demonstrated specimens of blood of leukæmia and pernicious anæmia, and talked of the value of Ehrlich's method of blood-staining. Dr. Daland talked about malaria and relapsing fever in Russia, and demonstrated the pathological microörganisms of these diseases.

An interesting discussion of these papers followed, thus at once making the benefit of the Association apparent to all.

Drs. Fitzgibbon and Mead, of Wisconsin, and Navy Surgeon Kenyoun were present as visitors. Professor Miller then kindly offered the use of the Dental Lecturing-room of the University, Dorotheen-strasse 40, as a permanent meeting-room for the Society.

New-comers and others desiring information will please apply to the Secretary, Dr. Frederick R. Weber, Charité, Berlin.

Congress of American Physicians and Surgeons.—The meetings of the Congress of American Physicians and Surgeons will be held in Washington from 3 to 6 P. M., September 22, 23, 24, and 25, 1891. William Pepper, M.D., Chairman of the Executive Committee.

Licensing Boards.—At the suggestion of Dr. William Perry Watson, Secretary of the State Board of Medical Examiners of New Jersey, Dr. Rauch has called a meeting of one or more representatives of the various medical licensing boards in the United States, to be held in Washington, D. C., on May 6th, during the meeting of the American Medical Association, in order to effect a permanent organization and to make rules and examinations as nearly uniform as possible. Licensing boards now control medical practice in twenty-one States. It is expected that much good will come of this meeting.

Tuberculosis in Public Schools.—The Health Officer at Milford, Michigan, reported to his State Board that several deaths by phthisis had occurred in the public schools, and that school attendance had been noticeably affected thereby. He inquired of the Board if any pupil or person known to have pulmonary consumption should be excluded from school, as is required in the case of scarlet fever and other contagious diseases. The Board adopted resolutions declaring that such cases should be excluded during the active stages of the disease and until the symptoms of cough and expectoration cease.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING APRIL 4, 1891.

STEPHENSON, F. B., *Surgeon.*—Ordered to the U. S. S. "Marion."

BERRYHILL, T. B., *Passed Assistant Surgeon.*—Ordered to the U. S. S. "Marion."

WHITE, C. H, *Medical Inspector.*—Ordered to the U. S. S. "Baltimore."

CLARK, J. H., *Medical Inspector.*—Ordered to the U. S. S. "San Francisco."

HOEHLING, A. A., *Medical Inspector.*—Detached from President of Naval Examining Board.

CRANDALL, RAND P., *Assistant Surgeon.*—Promoted to Passed Assistant Surgeon, February 27, 1891.

BROWNELL, CARL DEWOLF, of Bristol, R. I.—Commissioned an Assistant Surgeon in the Navy, April 1st.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication, or 250 reprints will be furnished instead of payment, provided request for reprints be noted by author at top of manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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